

SKP2**	U P I	... A R G L D	D E S	L L L	Q G	F S C	...	20	...	L P S	E J	...	30	...	L K V	S G	...	40	...	Y R R	V W	...	50	...	D E S	L W Q	
Fbp1**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	C L A K S	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp2**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp3a**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp3b**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp4*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp5*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp6*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp7**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp8**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp9**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp10	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp11	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp12	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp13*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp14	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp15*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp16*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp17**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp18*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp19*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp20	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp21*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp22*	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp23**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp24**	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...
Fbp25	U P I	... Q Q L D	L E S	F Y L	L K W	...	...	...	...	L D P Q T	...	...	...	...	L C A A E	L	...	...	...	Y R R	V W	...	...	...	...	...	...

FIG. 1

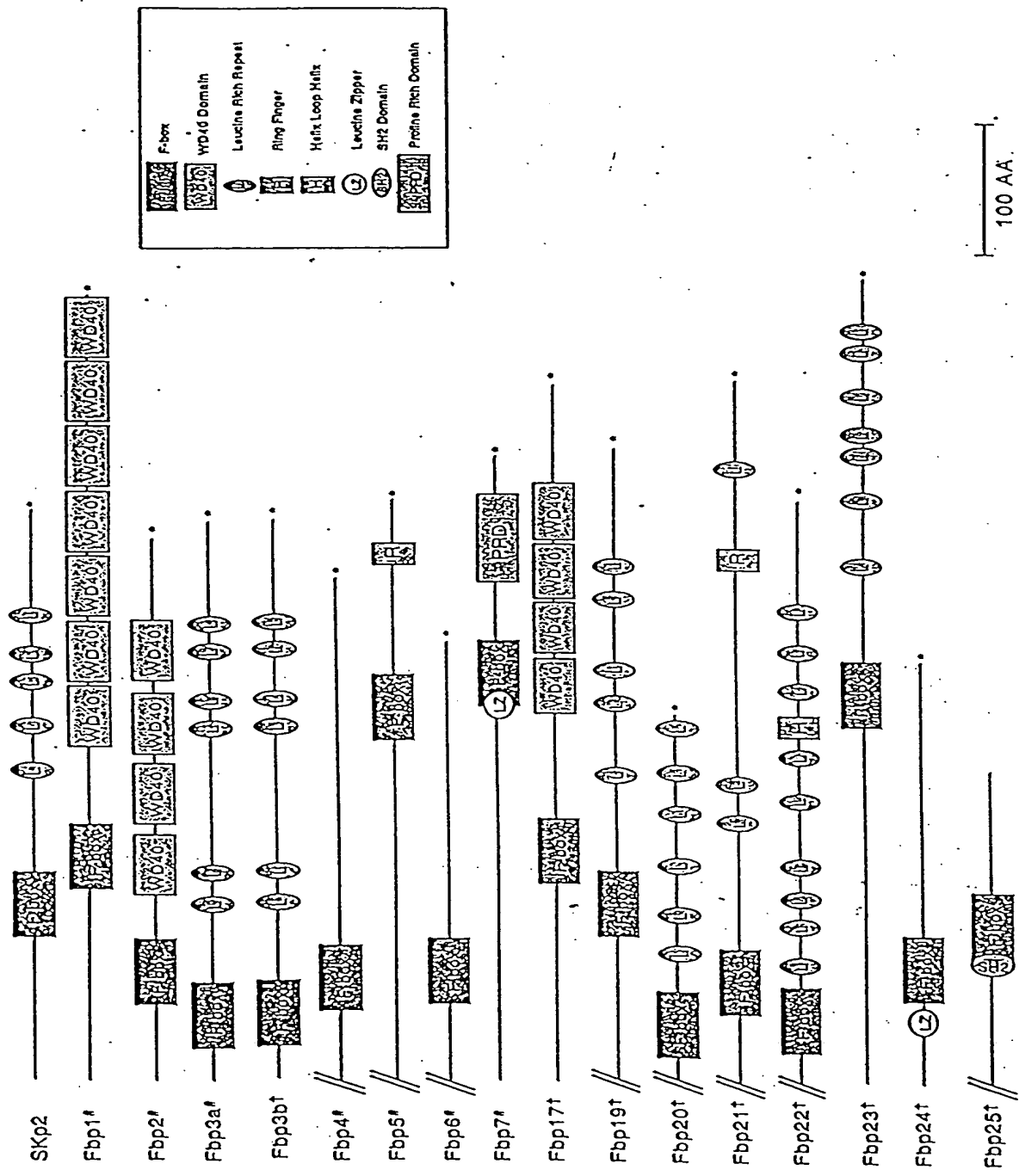


FIG. 2

10 20 30 40 50 60
MDPAEAVLQEKALKFMNSSEREDCNNGEPPrKIIPeKNSLRQTYNSCARLCLNQETVCLA

70 80 90 100 110 120
STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHL

130 140 150 160 170 180
ISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY

190 200 210 220 230 240
RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII

250 260 270 280 290 300
QDIETIESNWRCGRHSLQRHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK

310 320 330 340 350 360
RILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNLIHHCEAVLHLRFNNGMM

370 380 390 400 410 420
VTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC

430 440 450 460 470 480
EFVRTLNHGKRGIAQLQYRDLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN

490 500 510 520 530 540
KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCRLTLVEHSGRVFRLQFDEFQIVSSSHDDT

550 560
ILIWDFLNDPAAQAEPPrSPSRITYTISR

FIG. 3A

10 20 30 40 50 60 70 80 90
TGGCTTGGCTGGCGCTGGCACCAAGGGGCGGGCCCGGGAGAGCGGACCCAGTGGCCTCGGCGATTATGGACCCGGCGGAGGGCGTGGCTGC

100 110 120 130 140 150 160 170 180
AAGAGAAGGCACTCAAGTTTATGAATTCTCAGAGAGAGAAGACTGTAATAATGGCGAACCCCTAGGAAGATAATACCAGAGAAGAATCACT

190 200 210 220 230 240 250 260 270 280
TAGACAGACATACAACAGCTGTGCCAGACTCTGCTTAAACCAAGAAACAGTATGTTTAGCAAGCACTGCTATGAAGACTGAGAATTGTGTGGCC

290 300 310 320 330 340 350 360 370
AAAACAAACTTGCCAAATGGCACTTCCAGTATGATTTGTGCCAAGCAACGGAACCTCTCAGCAAGCTATGAAAAGGAAAAGGAACCTGTGTGTCA

380 390 400 410 420 430 440 450 460 470
AATACTTTGAGCAGTGGTCAGAGTCAGATCAAGTGAATTTGTGGAACATCTTATATCCCAAATGTGTATTACCAACATGGGCACATAAACTC

480 490 500 510 520 530 540 550 560
GTATCTTAAACCTATGTTGCAGAGAGATTTACATACTGCTCTGCCAGCTCGGGGATTGGATCATATCGCTGAGAACATTCTGTACATACCTGGAT

570 580 590 600 610 620 630 640 650
GCCAAATCACTATGTGCTGCTCAACTTGTGTGCAAGGAATGGTACCGAGTGAACCTCTGATGGCATGCTGTGGAAGAAGCTTATCGAGAGAATGG

660 670 680 690 700 710 720 730 740 750
TCAGGACAGATTTCTGTGGAGAGGGCTGGCAGAACGAAGAGGATGGGGACAGTATTTATTCAAAAACAAACCTCTGACGGGAATGCTCTCTC

760 770 780 790 800 810 820 830 840
CAACTCTTTTATAGAGCACTTTATCCTAAAATTATACAAGACATTGAGACAATAGAATCTAATTGGAGATGTGGAAGACATAGTTTACAGAGA

850 860 870 880 890 900 910 920 930 940
ATTCAGTCCCGAAGTGAACAAGCAAGGAGTTTACTGTTTACAGTATGATGATCAGAAAATAGTAAGCGGCCTTCGAGACAACCAATCAAGA

950 960 970 980 990 1000 1010 1020 1030
TCTGGGATAAAAACACATTGGAATGCAAGCGAATTCACAGGCCATACAGGTTTCACTCTGTCTCCAGTATGATGAGAGAGTGATCATAAC

1040 1050 1060 1070 1080 1090 1100 1110 1120
AGGATCATCGGATTCCACGGTCAGAGTGTGGATGTAATAACAGGTGAAATGCTAAACACGTTGATTACCATTTGTGAAGCAGTTCTGCACTTG

1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
CGTTTCAATAATGGCATGATGGTCACTCTCCAAAGATCGTTCCATTGCTGTATGGGATATGGCCTCCCAACTGACATTACCTCCGGAGGG

1230 1240 1250 1260 1270 1280 1290 1300 1310
TGCTGGTCCGACACCGAGCTGCTGTCAATGTTGTAGACTTTGATGACAAGTACATTGTTTCTGCATCTGGGGATAGAATATAAAGGTATGGAA

1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
CACAAGTACTTGTGAATTTGTAAGGACCTTAAATGGACACAACGAGGCATTCCTGTTTGCAGTACAGGGACAGGCTGGTAGTGAGTGGCTCA

1420 1430 1440 1450 1460 1470 1480 1490 1500
TCTGACAACACTATCAGATTATGGGACATAGAATGTTGTCATGTTTACGAGTGTAGAAAGGCCATGAGGAATTTGGTGCCTTGTATTTCGATTTC

1510 1520 1530 1540 1550 1560 1570 1580 1590
ATAACAAGAGGATAGTCAGTGGGGCTATGATGGAAAAATTAAAGTGTGGGATCTTGTGGCTGCTTTGGACCCCGTGCTCTGCAGGGGACACT

1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
CTGTCTACGGACCCCTTGTGGAGCATTCGGGAAGAGTTTTCGACTACAGTTTGATGAATTCAGATTGTCACTAGTTTACATGATGACACAATC

1700 1710 1720 1730 1740 1750 1760 1770 1780
CTCATCTGGGACTTCTCTAAATGATCCAGCTGCCCAAGCTGAACCCCCCGTTCCCTTCTCGAACATACACCTACATCTCCAGATAAATAACCA

1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
TACACTGACCTCACTATTGCCAGGACCCATTAAAGTTGGGTTATTTAACGTATCTGCCAATACCAGGATGAGCAACAACAGTAACAATCAAAC

1890 1900 1910 1920 1930 1940 1950 1960 1970
TACTGCCCAAGTTTCCCTGGACTAGCCGAGGAGCAGGGCTTTGAGACTCCTGTTGGGACACAGTTGGTCTGCAGTCCGGCCAGGACGGTCTACTC

1980 1990 2000 2010 2020 2030 2040 2050 2060
AGCACAACCTGACTGCTTCAGTCTGCTATCAGAAGATGCTCTCTATCAATTGTGAATGATTGGAACCTTTTAAACCTCCCTCTCTCTCTCTT

2070 2080 2090 2100 2110 2120 2130 2140 2150
CACCTCTGCACCTAGTTTTTTCCCATTTGGTTCCAGACAAAGGTGACTTATAAATATATTTAGTGTTTTGCCAGAAAAA

FIG. 3B

10 20 30 40 50 60
MERKDFETWLDNISVTFLSLTDLQKNETLDHLISLSGAVQLRHLSNNLETLLKRDFLKLL

70 80 90 100 110 120
PLELSFYLLKWLDPQTLLTCCLVSKQWNKVISACTEVWQTACKNLGWQIDDSVQDALHWK

130 140 150 160 170 180
KVYLKAILRMKQLEDHEAFETSSSLIGH SARVYALYYKDGLLCTGSDDL SAKLWDVSTGQC

190 200 210 220 230 240
VYGIQTHTCAAVKFDEQKLV TGSFDNTVACWEWSSGARTQHFRGHTGAVFSVDYNDELDI

250 260 270 280 290 300
LVSGSADFTVKVWALSAGTCLNTLTGHT EWVTKVVLQKCKVKSL LHSPGDYILLSADKYE

310 320 330 340 350 360
IKIWPIGREINCKCLKTSLVSEDRSICLQPR LHFDGKYIVCSSALGLYQWDFASYDILRV

370 380 390 400 410 420
IKTPEIANLALLGFGDIFALLFDNRYLYIMDLRTESLISRWPLPEYRESKRGSSFLAGEH

PG

FIG. 4A

10 20 30 40 50 60 70 80 90
ATGGAGAGAAAGGACTTTGAGACATGGCTTGATAACATTCTGTACATTCTTTCTCTGACGGACTTGAGAAAAATGAAACTCTGGATCACC
100 110 120 130 140 150 160 170 180
TGATTAGTCTGAGTGGGGCAGTCCAGCTCAGGCATCTCTCCAAATAACCTAGAGACTCTCTCAAGCGGGACTTCCTCAAACCTCCTTCCCTGGA
190 200 210 220 230 240 250 260 270 280
GCTCAGTTTTTATTGTTAAAAATGGCTCGATCCTCAGACTTTACTCACATGCTGCTCTCTAAACAGTGGAAATAAGTGATAAGTGCTGT
290 300 310 320 330 340 350 360 370
ACAGAGGTGTGGCAGACTGCATGTAAAAATTGGGCTGGCAGATAGATGATTCTGTTTCAGGACGCTTTGCACTGGAAGAGGTTTATTGGAAGG
380 390 400 410 420 430 440 450 460 470
CTATTTTGAGAAATGAAGCAACTGGAGGACCATGAAGCCTTTGAACCTCGTCAATTAATTGGACACAGTCCAGAGTGTATGCACCTTTACTACAA
480 490 500 510 520 530 540 550 560
AGATGGACTTCTCTGTACAGGGTCAGATGACTTGTCTGCAAGCTGTGGGATGTGAGCACAGGGCAGTGGTTTATGGCATCCAGACCCACACT
570 580 590 600 610 620 630 640 650
TGTGCAGCGGTGAAGTTTGATGAACAGAAGCTTGTGACAGGCTCCTTTGACAACACTGTGGCTTGTCTGGGAATGGAGTTCCGGAGCCAGGACCC
660 670 680 690 700 710 720 730 740 750
AGCACTTTCCGGGGCACACGGGGCGGTATTTAGCGTGGACTACAATGATGAAGTGGATATCTTGGTGAGCGGCTCTGCAGACTTCACTGTGAA
760 770 780 790 800 810 820 830 840
AGTATCGGCTTTATCTGCTGGGACATGCCTGAACACACTCACCGGGCACAGGAATGGGTACCAAGGTAGTTTTCAGAAAGTCAAAAGTCAAG
850 860 870 880 890 900 910 920 930 940
TCTCTCTTGCACAGTCTCTGGAGACTACATCCTCTTAAGTGACAGACAAATATGAGATTAAGATTGGCCAAATGGGAGAGAAATCAACTGTAAGT
950 960 970 980 990 1000 1010 1020 1030
GCTTAAAGACATTGTCTGTCTCTGAGGATAGAAGTATCTGCCTGCAGCCAAGACTTCATTTTGATGGCAAATACATTGTCTGTAGTTCAGCACT
1040 1050 1060 1070 1080 1090 1100 1110 1120
TGGTCTCTACCACTGGGACTTTGCCAGTTATGATATTCTCAGGGTCATCAAGACTCTCTGAGATAGCAAACCTTGGCCTTGCTTGGCTTTGGAGAT
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
ATCTTTGGCCTCTGTGTTGACAACCGCTACCTGTACATCATGGACTTGGGACAGAGAGCCTGATTAGTCCCTGGCCTCTGCCAGAGTACAGGG
1230 1240 1250 1260 1270 1280 1290 1300 1310
AATCAAAAGAGAGGCTCAAGCTTCTTGGCAGGCGAACATCTGGCTGAATGGACTGGATGGGCACATGACACGGGCTTGGTCTTTGCCACCAGC
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
ATGCCTGACCACAGTATTCACTGGTGTGTGGAAGGAGCAGGCTGACACCATGAGCCACCAACCGCTGACTGACTTTGGGTGCCGGGCTGGG
1420 1430 1440 1450 1460 1470
GGTTTTGGGTGCACCTCTGCGGCACCGGACTGCATGAACCAAAGTTCTCACCTAATGGTATCATCA

FIG. 4B

10	20	30	40	50	60
MKRGGGRDSDRNSSEEGTAEKSKKLRTTNEHSQTCDWGNLLQDIILQVFKYLPLLDRHAS					
70	80	90	100	110	120
QVCRNWNQVFHMPDLWRCFEFELNQPATSYLKATHPELIKQIIKRHSNHLQYVSFKVDSS					
130	140	150	160	170	180
KESAEAACDILSQLVNCSLKTGLISTARPSFMDLPKSHFISALTVVFNKSLSSLKID					
190	200	210	220	230	240
DTPVDDPSLKVLVANNSDTLKKLMSSCPHVSPAGILCVADQCHGLRELALNYHLLSDEL					
250	260	270	280	290	300
LLALSSEKHVRLEHLRIDVVSSENPQTHFHTIQKSSWDAFIRHSPKVNLMYFFLYEEEF					
310	320	330	340	350	360
DPFFRYEIPATHLYFGRSVSKDVLGRVGMTCPRLVELVVCANGLRPLDEELIRIAERCKN					
370	380	390	400	410	420
LSAIGLGECEVSCSAFVEFVKMCGGRLSQLSIMEEVLIPDQKYSLEQIHWEVSKHLGRVW					
FPDMMPTW					

FIG. 5A

10 20 30 40 50 60 70 80 90
CGGGGTGGTGTGTGGGGGAAGCCGCCCGGCAGCAGGATGAAACGAGGAGGAAGAGATAGTGACCGTAATTCATCAGAAGAAGGAAGTGCAGA
100 110 120 130 140 150 160 170 180
GAAATCCAAGAACTGAGGACTACAAATGAGCATTCTCAGACTTGTGATTGGGGTAATCTCCTCAGGACATTATTCTCCAAGTATTTAAATAT
190 200 210 220 230 240 250 260 270 280
TTGCCTCTTCTTGACCGGGCTCATGCTTCACAAGTTTGGCCGAACTGGAACAGGTATTTACATGCCTGACTTGTGGAGATGTTTTGAATTTG
290 300 310 320 330 340 350 360 370
AACTGAATCAGCCAGCTACATCTTATTTGAAAGCTACCCATCCAGAGCTGATCAAAAGACATTATTAAGACATTCAAACCATCTACAATATGT
380 390 400 410 420 430 440 450 460 470
CAGCTTCAAGGTGGACAGCAGCAAGGAATCAGCTGAAGCAGCTTGTGATATAGTATCGCAACTTGTGAATTGCTCTTTAAAAACACTTGGACTT
480 490 500 510 520 530 540 550 560
ATTTCAACTGCTCGACCAAGCTTTATGGATTTACCAAGTCTCACTTTATCTCTGCACTGACAGTTGTGTTCTGTAAGTCCAAATCCCTGTCTT
570 580 590 600 610 620 630 640 650
CGCTTAAGATAGATGATACTCCAGTAGATGATCCATCTCTCAAAGTACTAGTGGCCAAACAATAGTGATACACTCAAGCTGTTGAAAATGAGCAG
660 670 680 690 700 710 720 730 740 750
CTGTCTCATGTCTCTCCAGCAGGTATCCTTTGTGTGGCTGATCAGTGTACGGCTTAAGAGAACTAGCCCTGAACCTACTTATTGAGTGAT
760 770 780 790 800 810 820 830 840
GAGTTGTTACTTGCATTGTCTTCTGAAAAACATGTTTCGATTAGAACATTTCCGCATTGATGTAGTCAGTGAGAATCCTGGACAGACACACTTCC
850 860 870 880 890 900 910 920 930 940
ATACTATTGAGAAGAGTAGCTGGGATGCTTTCATCAGACATTACCCAAAGTGAACCTTAGTGATGTATTTTTTTTATATGAAGAAGAAATTTGA
950 960 970 980 990 1000 1010 1020 1030
CCCCCTCTTTCCGTATGAAATACCTGCCACCCATCTGTACTTTGGGAGATCAGTAAGCAAAGATGTGCTTGGCCGTGCGGAATGACATGCCCT
1040 1050 1060 1070 1080 1090 1100 1110 1120
AGACTGGTTGAACTAGTAGTGTGTGCAAAATGGATTACGGCCACTTGATGAAGAGTTAATTCGCATTGCAGAACCTTGCAAAAATTTGTCAGCTA
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
TTGGACTAGGGGAATGTGAAGTCTCATGTAGTGCCCTTTGTTGAGTTTGTGAAGATGTGCGTGGCCGCTATCTCAATTATCCATTATGGAAGA
1230 1240 1250 1260 1270 1280 1290 1300 1310
AGTACTAATTCCTGACCAAAAGTATAGTTTGGAGCAGATTCACTGGGAAGTGTCCAAGCATCTTGGTAGGGTGTGCTTCCCGACATGATCCCC
1320 1330 1340 1350 1360 1370 1380 1390 1400
ACTTGGTAAAACTGCATGATGAATAGCACCTTAATTTCAAGCAAATGTATTATAATTAAAGTTTTATTTGCTGTAAAAA

FIG. 5B

10 20 30 40 50 60
MKRNSLSVENKIVQLSGAAKQPKVGFYSSLNQTHTHTVLLDWGSLPHHVVLQIFQYLPLL
70 80 90 100 110 120
DRACASSVCRRWNEVFHISDLWRKFELNQSATSSFKSTHPDLIQQIIKKHFAHLQYVS
130 140 150 160 170 180
FKVDSSAESAEAAACDILSQLVNCSIQTLGLISTAKPSFMNVSESHFVSALTVVFINSKSL
190 200 210 220 230 240
SSIKIEDTPVDDPSLKILVANNSDTLRLPKMSSCPHVSSDGILCVADRCQGLRELALNYY
250 260 270 280 290 300
ILTDELFLALSSETHVNLEHLRIDVVSSENPQIKFHAVKKHSDALIKHSPRVNVVMHFF
310 320 330 340 350 360
LYEEEFETFFKEETPVTHLYFGRSVSKVVLGRVGLNCPRLIELVVCANDLQPLDNELICI
370 380 390 400 410 420
AEHCTNLTA GLSKCEVSCSAFIRFVRLCERRLTQLSVMEEVLIPDEDYSLDEIHTEVSK
430
YLGRVWF PDVMPLW

FIG. 6A

10 20 30 40 50 60
ACATTTTCTAATGTTTACAGAATGAAGAGGAACAGTTTATCTGTTGAGAATAAAATTGTCCAGTTGTCA
70 80 90 100 110 120 130
GGAGCAGCGAAACAGCCAAAAGTTGGGTCTACTCTTCTCTCAACCAGACTCATACACACACGGTTCTT
140 150 160 170 180 190 200
CTAGACTGGGGAGTTTGCCCTCACCATGTAGTATTACAAATTTTTCAGTATCTTCCTTTACTAGATCGG
210 220 230 240 250 260 270
GCCTGTGCATCTTCTGTATGTAGGAGGTGGAATGAAGTTTTTCATATTCTGACCTTTGGAGAAAAGTTT
280 290 300 310 320 330 340
GAATTTGAACCTGAACCAGTCAGCTACTTTCATCTTTTAAGTCCACTCATCCTGATCTCATTCAGCAGATC
350 360 370 380 390 400 410
ATTAAAAAGCATTTTGCTCATCTTCAGTATGTCAGCTTTAAGGTTGACAGTAGCGCTGAGTCAGCAGAA
420 430 440 450 460 470 480
GCTGCCTGTGATATACTCTCTCAGCTGGTAAATGTTCCATCCAGACCTTGGGCTTGATTCAACAGCC
490 500 510 520 530 540 550
AAGCCAAGTTTCATGAATGTGTGCGAGTCTCATTTTGTGTGTCAGCACTTACAGTTGTTTTATCAACTCA
560 570 580 590 600 610 620
AAATCATTATCATCAATCAAAATTGAAGATACACCAGTGGATGATCCTTCATTGAAGATTCTGTGGCC
630 640 650 660 670 680 690
AATAATAGTGACACTCTAAGACTCCCAAAGATGAGTAGCTGTCTCATGTTTCATCTGATGGAATTCTT
700 710 720 730 740 750
TGTGTAGCTGACCGTTGTCAAGGCCTTAGAGAACTGGCGTTGAATTATTACATCCTAACTGATGAACCTT
760 770 780 790 800 810 820
TTCCTTGCACTCTCAAGCGAGACTCATGTTAACCTTGAACATCTTCGAATTGATGTTGTGAGTGAAAAAT
830 840 850 860 870 880 890
CCTGGACAGATTAAATTTTCATGCTGTTAAAAACACAGTTGGGATGCACTTATTAAACATTCCCCTAGA
900 910 920 930 940 950 960
GTTAATGTTGTTATGCACCTTCTTTCTATATGAAGAGGAATTTCGAGACGTTCTTCAAAGAAGAAACCCCT
970 980 990 1000 1010 1020 1030
GTTACTCACCTTTATTTTGGTTCGTTTCAGTCAGCAAAGTGGTTTTAGGACGGGTAGGTCTCAACTGTCCT
1040 1050 1060 1070 1080 1090 1100
CGACTGATTGAGTTAGTGGTGTGTGCTAATGATCTTCAGCCTCTTGATAATGAACCTATTGTATTGCT
1110 1120 1130 1140 1150 1160 1170
GAACACTGTACAAACCTAACAGCCTTGGGCCTCAGCAAATGTGAAGTTAGCTGCAGTGCCTTCATCAGG
1180 1190 1200 1210 1220 1230 1240
TTTGTAAAGACTGTGTGAGAGAAGGTTAACACAGCTCTCTGTAATGGAGGAAGTTTTGATCCCTGATGAG
1250 1260 1270 1280 1290 1300 1310
GATTATAGCCTAGATGAAATTCACACTGAAGTCTCCAAATACCTGGGAAGAGTATGGTTCCCTGATGTG
1320
ATGCCTCTCTGG

FIG. 6B

10 20 30 40 50 60
MAGSEPRSGTNSPPPPFSDWGRLEAAILSGWKTFWQSVSKDRVARTTSREEVDEAASTLT
70 80 90 100 110 120
RLPIDVQLYILSFLSPHDLCLGSTNHYWNETVRNPILWRYFLLRDLPSWSSVDWKS LPY
130 140 150 160 170 180
LQILKKPISEVSDGAFFDYMAYLMCCPYTRRASKSSRPMYGAVTSFLHSLIIPNEPRFA
190 200 210 220 230 240
LFGPRLEQLNTSLVLSLLSSEELCPTAGLPQRQIDGIGSGVNFQLNNQHKFNILILYSTT
250 260 270 280 290 300
RKERDRAREEHTSAVNKMFSRHNEGDDRPGSRYSVIPQIQKLCEVVDGFIYVANA EAHKR
310 320 330 340 350 360
HEWQDEF SHIMAMTDPAFGSSGRPLLVLSCISQGDVKRMPCFYLAHELHLNLLNHPWL VQ
370 380 390 400 410 420
DTEAETLTGFLNGIEWILEEVESKRAR*FSFQILGTETI*NLLRS*CEYLLSQPTLSCL
430 440 450 460 470 480
FADRLSFGQL*LLCFLYYFYFLP*INYKKRVSVLVFSPKMNL*TFFW*FLYFLSF*KY*I

L

FIG. 7A

10 20 30 40 50 60
ATGGCGGAAGCGAGCCGCGCAGCGGAACAAATTGCGCGCCGCGCCCTTCAGCGACTGGGGCCGCGCTG

70 80 90 100 110 120 130
GAGGCGGCCATCCTCAGCGGCTGGAAGACCTTCTGGCAGTCAGTGAGCAAGGATAGGGTGGCGGTACG

140 150 160 170 180 190 200
ACCTCCCGGAGGAGGTGGATGAGGCGGCCAGCACCTGACGCGGCTGCCGATTGATGTACAGCTATAT

210 220 230 240 250 260 270
ATTTTGCTCTTCTTTCACTCATGATCTGTGTCAGTTGGGAAGTACAAATCATTATTGGAATGAACT

280 290 300 310 320 330 340
GTAAGAAATCCAATTCTGTGGAGATACTTTTGTGAGGGATCTCTCTTCTTGGTCTCTGTGTGACTGG

350 360 370 380 390 400 410
AAGTCTCTCCATATCTACAAATCTTAAAAAGCCTATATCTGAGGTCTCTGTATGGTGCATTTTTTGAC

420 430 440 450 460 470 480
TACATGGCAGTCTATCTAATGTGCTGTCCATACACAAGAAGAGCTTCAAAATCCAGCCGCTCTATGTAT

490 500 510 520 530 540 550
GGAGCTGTCACTTCTTTTTTACACTCCCTGATCATTTCCCAATGAACCTCGATTGCTCTGTTTGGACCA

560 570 580 590 600 610 620
CGTTTGGAAACAATTGAATACCTCTTTGGTGTGAGCTTGCTGTCTTCAGAGGAACTTTGGCCCAACAGCT

630 640 650 660 670 680 690
GGTTTGCCCTCAGAGGCAGATTGATGGTATTGGATCAGGAGTCAATTTTCAGTTGAACAACCAACATAAA

700 710 720 730 740 750
TTCAACATTCTAATCTTATATTCAACTACCAGAAAGGAAGAGATAGAGCAAGGGAAGAGCATACAAGT

760 770 780 790 800 810 820
GCAGTTAACAAGATGTTTCAGTCGACACAATGAAGGTGATGATCGACCAGGAAGCCGTTACAGTGTGATT

830 840 850 860 870 880 890
CCACAGATTCAAAAACGTGTGAAGTTGTAGATGGGTTCATCTATGTTGCAAAATGCTGAAGCTCATAAA

900 910 920 930 940 950 960
AGACATGAATGGCAAGATGAATTTTCTCATATTATGGCAATGACAGATCCAGCCTTTGGGTCTTCGGGA

970 980 990 1000 1010 1020 1030
AGACCATTGTTGGTTTTATCTTGATTTTCTCAAGGGGATGTAAAAAGAAATGCCCTGTTTTTATTGGCT

1040 1050 1060 1070 1080 1090 1100
CATGAGCTGCATCTGAATCTTCTAAATCACCCATGGCTGGTCCAGGATACAGAGGCTGAAACTCTGACT

1110 1120 1130 1140 1150 1160 1170
GGTTTTTTGAATGGCATTGAGTGGATTCTTGAAGAAGTGAATCTAAGCGTGCAAGATGATTCCTTTT

1180 1190 1200 1210 1220 1230 1240
CAGATCTTGGGAACGAAACCAATTTGAAATTTATTACTAAGGTCGTGATGTGAATATTTGCTCAGTCAG

1250 1260 1270 1280 1290 1300 1310
CCCACCTTGCTCTGCTTTTTCAGATAGGCTTTCATTGACAGCTATAACTGCTGTGTTTTTATAT

1320 1330 1340 1350 1360 1370 1380
TATTTTTACTTTTTTACCATAAATCAATTACAAGAAAAGAGTTTCAGTCTAGTATTTAGCCCCAAAATG

1390 1400 1410 1420 1430 1440
AACCTTTAAACATTTTTTGGTAATTTTATATTTTCTGTCTTTTAAAAATATTAAATTTTGG

FIG. 7B

10	20	30	40	50	60
MSRRPCSCALRPPRCSCSASPSAVTAAGRPRPSDSCKEESSTLSVKMKCDFNCNHVHSGL					
70	80	90	100	110	120
KLVKPDDIGRLVSYTPAYLEGSCKDCKDYERLSCIGSPIVSPRIVQLETESKRLHNKEN					
130	140	150	160	170	180
QHVQQTNLNSTNEIEALETSLRYEDSGYSSFSLSQGLSEHEEGSLLEENFGDSLQSCLLQI					
190	200	210	220	230	240
QSPDQYPNKNLLPVLHFEKVVCSTLKKNAKRNPKVDREMLKEIIARGNFRLLQNIIGRKM					
250	260	270	280	290	300
LECVDILSELFRRGLRHVLATILAQLSDMDLINVSKVSTTWKKILEDDKGAFQLYSKAIQ					
310	320	330	340	350	360
RVTENNNKFSPHASTREYVMFRTPLASVQKSAAQTSKKDAQTKLSNQGDKGQSTYSRHN					
370	380	390	400	410	420
EFSEVAKTLKKNESLKACIRCNSPAKYDCYLQRATCKREGCGFDYCTKCLCNHYHTTKDCS					
430	440				
DGKLLKASCKIGPLPGTKKSKKNLRL					

FIG. 8A

10 20 30 40 50 60 70 80 90
AGGTTGCTCAGCTGCCCCGGAGCGGTTCCTCCACCTGAGGCAGACACCACTCGGTGGCATGAAGCCGGCGCCCTGCAGCTGGCCCTACGG
100 110 120 130 140 150 160 170 180
CCACCCCGCTGCTCTGCAGCGCCAGCCCGCAGCGCAGTGACAGCCCGCGCGCCCTCGACCTCGGATAGTTGTAAAGAAGAAAGTTCTACCC
190 200 210 220 230 240 250 260 270 280
TTTCTGTCAAAATGAAGTGTGATTTTAATTGTAACCATGTTTCATTCGGACTTAACTGGTAAAACTGATGACATTGGAAGACTAGTTTCTTA
290 300 310 320 330 340 350 360 370
CACCCCTGCATATCTGGAAGGTTCTGTAAAGACTGCATTAAAGACTATGAAAGGCTGTCATGTATTGGGTACCCGATTGTGAGCCCTAGGATT
380 390 400 410 420 430 440 450 460 470
GTACAACTTGAAGCTGAAGCAAGCGCTTGCATAACAAGGAAATCAACATGTGCAACAGACACTTAATAGTACAAATGAAATAGAAGCACTAG
480 490 500 510 520 530 540 550 560
AGACCAGTAGACTTTATGAAGACAGTGGCTATTCTCTCATTTTCTCTACAAAGTGGCTCAGTGAACATGAAGAAGGTAGCCTCTGGAGGAGAA
570 580 590 600 610 620 630 640 650
TTTCGGTGACAGTCTACAATCTGCTGTACAAATACAAGCCAGACCAATATCCCAACAAAACTTGCTGCCAGTTCTTCTATTTTGAAGAAA
660 670 680 690 700 710 720 730 740 750
GTGGTTTGTTCACATTAAGAAAGAAATGCAAAACGAAATCTTAAAGTAGATCGGGAGATGCTGAAGGAAATATAGCCAGAGGAAATTTTAGAC
760 770 780 790 800 810 820 830 840
TGCAGATATAATTCGCAGAAAAATGGGCTAGAATGTGTAGATATTCTCAGCGAAGCTTTTCGAAGGGGACTCAGACATGTCTTAGCAACTAT
850 860 870 880 890 900 910 920 930 940
TTTAGCACAAGTCAAGTACATGGACTTAATCAATGTGTCTAAAGTGACCAACTTGAAGAAGATCTTAGAAGATGATAAGGGGGCATTCCAG
950 960 970 980 990 1000 1010 1020 1030
TTGTACAGTAAAGCAATACAAAGAGTTACCGAAAAACAATAAATTTTCACTCATGCTTCAACCAGAGAATATGTTATGTTTCAAGACCCCA
1040 1050 1060 1070 1080 1090 1100 1110 1120
TGGCTTCTGTTCAGAAATCAGCAGCCAGACTTCTCTCAAAAAGATGCTCAAAACCAAGTTATCCAATCAAGGTGATCAGAAAGGTTCTACTTA
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
TAGTCGACACAATGAATCTCTGAGGTTGCCAAGACATTGAAAAAGAAGGAAAGGCTCAAGGCTGTATTGCTGTAATTCACCTGCAAAATAT
1230 1240 1250 1260 1270 1280 1290 1300 1310
GATTGCTATTTACAAAGGGCAACCTGCAACGAGAGGCTGTGGATTGATTATTGTACGAAGTGTCTGTGTAATTATCATACTACTAAAGACT
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
GTTCAGATGGCAAGCTCTCAAGCCAGTTGTAAATAGGTCCTGCTGCTGACAAAGAAAGCAAAAGAAATTTACGAAGATTGTGATCTCT
1420 1430 1440 1450 1460 1470 1480 1490 1500
TATTAATCAATGTTACTGATCATGAATGTTAGTTAGAAAAATGTTAGGTTTAACTTAAAAAAATGTTATTGTGATTTTCAATTTTATGTTG
1510 1520 1530 1540 1550 1560 1570 1580 1590
AAATCGGTGTAGTATCTGAGGTTTTTTTCCCCCAGAGATAAAGAGGATAGACAACCTCTTAAATATTTTACAATTTAATGAGAAAAAGT
1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
TTAAATTTCTCAATACAAATCAACAATTTAAATATTTTAAAGAAAAAGGAAAGTAGATAGTACTGAGGGTAAAAAAATGATTCAA
1700 1710 1720 1730 1740 1750 1760 1770 1780
TTTTATGTTAAAGGAAACCATGCAATTTTACCTAGACAGTCTTAAATATGTTCTGGTTTTCATCTGTTAGCATTTCAGACATTTTATGTTCT
1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
CTTACTCAATTGATACCAACAGAAATATCAACTTCTGGAGTCTATTAAATGTGTTGTCACCTTTCTAAAGCTTTTTTTCATGTGTGTTATTC
1890 1900 1910 1920 1930 1940 1950 1960 1970
CAAGAAAGTATCCTTTGTAAAACTTGCTTGTTTTCTTATTCTGAAATCTGTTTAAATATTTTGTATACATGTAATATTTCTGTATTTTT
1980 1990 2000 2010 2020 2030 2040 2050 2060
TATATGTCAAAGAAATATGCTCTGTATGTATACATATAAAAAATAAATTTTCTCAATAAAATGTAAGCTTAAAAAAATTTTAACTCGAG
2070
ACTAGTGC

FIG. 8B

10 20 30 40 50 60
ARSGASALRRRRVQVWVLSRPPPGGGDSFTRRPQRGPGPGGSQAMDAPHSKAALDSINE
70 80 90 100 110 120
LPDNILLELFTHVPAQQLLNCRVCSLWRDLIDLTLWKRKCLRKGFITKDWDQPVADW
130 140 150 160 170 180
KIFYFLRSLHRNLLRNPCAENDMFAWQIDFNGGDRWKVDSLPGAHGTEFPDPKVKSFTV
190 200 210 220 230 240
SYELCLKWELVDLLADRYWEELDTFRPDIVVKDWFAARADCGCTYQLKVQLASADYFVL
250 260 270 280 290 300
ASFEPFPPVTIQQWNNATWTEVSYTFSDYPRGVRYILFQHGGRDTQYWAGWYGPRVTNSSI
310 320 330
VVSPKMTRNQASSEAQPGQKHGQEEAAQSPYGAVVQIF

FIG. 9A

10 20 30 40 50 60 70 80 90
GCQCGTTCCGGAGCTTCGGCCCTCGGTAGGAGCGGGTGCAGGTGTGGGTGCTGAGCCGCCGCCGCTGGAGGGGAGACAGCTTCAGGACAC
100 110 120 130 140 150 160 170 180
GCAGGCCCGCAGCGAGGGCCCGGGGATCCAGGCCATGGACGCTCCCACTCCAAAGCAGCCCTGGACAGCATTAACGAGCTGCCCGA
190 200 210 220 230 240 250 260 270 280
TAACATCTGTCTGGAGCTGTTACGCCACGTGCCCGCCGCCAGCTGCTGCTGAAGTCCCGCTGGTCTGCAGCCTCTGGCGGGACCTCATCGAC
290 300 310 320 330 340 350 360 370
CTCCTGACCCCTCTGGAAACGCAAGTGCTGCGAAAGGGCTTCATCACCAGGACTGGGACCAGCCCGTGGCCGACTGGAAATCTTCTACTTCC
380 390 400 410 420 430 440 450 460 470
TACGGAGCCTGCATAGGAACCTCTGCGCAACCCGTGTGCTGAAAACGATATGTTTGTCATGGCAAATTGATTTCATGTTGGGGACCGCTGGAA
480 490 500 510 520 530 540 550 560
GGTGGATAGCCTCCCTCGAGCCACGGGACAGAATTCCTGACCCCAAAGTCAAGAAAGTCTTTTGTTCACATCCTACGAACGTGCGCTCAAGTGG
570 580 590 600 610 620 630 640 650
GAGCTGGTGGACCTTCTAGCCGACCGCTACTGGGAGGAGCTACTAGACACATTCCGGCCGGACATCGTGGTTAAGGACTGGTTTGTGTCAGAG
660 670 680 690 700 710 720 730 740 750
CCGACTGTGGCTGCACCTACCAACTCAAAGTGCAGCTGGCCCTCGGCTGACTACTTCGTGTTGGCCTCCTTCGAGCCCCCACTGTGACCATCCA
760 770 780 790 800 810 820 830 840
ACAGTGAACAATGCCACATGGACAGAGGTCTCTACACCTTCTCAGACTACCCCGGGGTGTCCGCTACATCTCTCCAGCATGGGGGACGG
850 860 870 880 890 900 910 920 930 940
GACACCCAGTACTGGGCAGGCTGGTATGGGCCCCGAGTCACCAACAGCAGATTGTGTCAGCCCCAAGATGACCAGGAACCGGCTCGTCCG
950 960 970 980 990 1000 1010 1020 1030
AGGCTCAGCCTGGGCAGAAAGCATGGACAGGAGGAGGCTGCCCAATCGCCCTACGGAGCTGTGTGTCAGATTTTCTGACAGCTGTCCATCCTGTG
1040 1050 1060 1070 1080 1090 1100 1110 1120
TCTGGGTCAGCCAGAGGTTCTCCAGGCAGGAGCTGAGCATGGGGTGGGCAGTGAGGTCCCTGTACCAGCGACTCCTGCCCCGGTTCAACCCTA
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
CCAGCTTGTGGTAACCTTACTGTACATAGCTCTGACGTTTTGTTGTAATAAATGTTTTTCAGGCCGGGCACTGTGGCTCAGCGCTGTAATCCCAG
1230 1240 1250 1260 1270 1280 1290 1300 1310
CACTTTGGGAGACCGAGGCAGGTGGATCAGGAGTCCAGGAGACAGACCATCTGGCCAACACGGTGAAACCCCTGTCTCTACTAAAAATACAA
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
AAAATTAGCCCGCGTGGTGGCGGGCCCTGTAGTCCAGCTACTCGGGAGGCTGATGCAGAAAGATGGCGTGAACCCGGAAGGCAGAGCTTGC
1420 1430 1440 1450 1460 1470 1480 1490 1500
AGTGAGCCGAGATCAGCCCACTGCCTCCAGCCTGGGTGACAGAGCGAGACTCTGGCTCATAAAATAATAATAATAATAATAATAATAATA
1510 1520 1530
AATGGTTTTTCAGTAAAAAAAAAAAAAAAAA

FIG. 9B

10 20 30 40 50 60
MSNTRFTITLNYKDPLTGDEETLASYGIVSGDLICLILHDDIPPPNIPSSSTDSEHSSLQN
70 80 90 100 110 120
NEQPSLATSSNQTSIQDEQPSDSFQGQAAQSGVWNDDSM LGPSQNFEAESIQDNAHMAEG
130 140 150 160 170 180
TGFYPSEPLLCSESVEGQVPHSLETLYQSADCSDANDALIVLIHLLMLESgyIPQGTEAK
190 200 210 220 230 240
ALSLPEKWKLSGVYKLQYMHHLCEGSSATLTCVPLGNLIVVNATLKINNEIRSVKRLQLL
250 260 270 280 290 300
PESFICKEKLGENVANIYKDLQKLSRLFKDQLVYPLLAFTTRQALNLPNVFGLVVLPLELK
310 320 330 340 350 360
LRIFRLLDVRSVLSLSAVCRDLFTASNDPLLWRFLYL RDFRDNTVRVQD TDWKEL YKRKH
370 380 390 400 410 420
IQRKESPKGRFVLLLPSSHTIPFY PNPLHPRPFSSRLPPGIIGGEYDQRPTLPYVGDP
430 440 450 460 470 480
ISSLIPGPGETPSQLPPLRPRFDPVGPLPGPNPILPGRGGPNDRFPFRPSRGRPTDGRLS
FM

FIG. 10A

10 20 30 40 50 60 70 80 90
TGGAAATCCCATGGACCATGTCTAATACCCGATTACAAATTACATTGAACATAAAGGATCCCCCTCACTGGAGATGAAGAGACCTTGGCTTCATA

100 110 120 130 140 150 160 170 180
TGGGATTGTTTCTGGGGACTTGATATGTTTGATTCTTCACGATGACATTCCACCGCCTAATATACCTTCATCCACAGATTTCAGAGCATTCTTCA

190 200 210 220 230 240 250 260 270 280
CTCCAGAACAATGAGCAACCCCTCTTTGGCCACCAGCTCCAATCAGACTAGCATACAGGATGAACAACCAAGTGATTTCATTCCAAGGACAGGCAG

290 300 310 320 330 340 350 360 370
CCCAGTCTGGTGTTTGGAAATGACGACAGTATGTTAGGGCTAGTCAAAATTTTGAAGCTGAGTCAATTCAAGATAATGGCATATGGCAGAGGG

380 390 400 410 420 430 440 450 460 470
CACAGGTTTCTATCCCTCAGAACCCCTGCTCTGTAGTGAATCGGTGGAAGGGCAAGTGCCACATTCAATTAGAGACCTTGTATCAATCAGCTGAC

480 490 500 510 520 530 540 550 560
TGTTCTGATGCCAATGATCGGTTGATAGTGTGTATACATCTTCTCATGTTGGAGTCAGGTTACATACCTCAGGGCACCGAAGCCAAAGCACTGT

570 580 590 600 610 620 630 640 650
CCCTCCCGGAGAAGTGAAGTTGAGCGGGGTGTATAAGCTGCAGTACATGCATCATCTCTGGGAGGGCAGCTCCGCTACTCTCACCTGTGTGCC

660 670 680 690 700 710 720 730 740 750
TTTGGGAAACCTGATTGTTGTAATGCTACACTAAAAATCAACAATGAGATTAGAAGTGTGAAAAGATTGCAGCTGCTACCAGAATCTTTTATT

760 770 780 790 800 810 820 830 840
TGCAAGAGAAACTAGGGGAAAAATGTAGCCAACATATACAAAGATCTTCAGAACTCTCTCGCCTCTTTAAAGACCAGCTGGTGATCTCTCTTC

850 860 870 880 890 900 910 920 930 940
TGGCTTTTACCCGACAAGCACTGAACCTACCAAAATGTATTGGGTGGTTCCTCCCATTTGGAAGTGAAGTACGGATCTTCCGACTTCTGGA

950 960 970 980 990 1000 1010 1020 1030
TGTTCTGTTCCGCTCTTGTCTTGTCTGCGGTTTGTCTGACCTCTTTACTGCTTCAAAATGACCCACTCCTGTGGAGGTTTTTATATCTGCGTGAT

1040 1050 1060 1070 1080 1090 1100 1110 1120
TTTCGAGACAATACTGTCAGAGTTCAAGACACAGATTGGAAGAAGTGTACAGGAAGAGGCACATACAAAGAAAAGAAATCCCCGAAAGGGCGGT

1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
TTGTGCTGCTCCTGCCATCGTCAACCCACACCATTCATTCTATCCCAACCCCTTGACCCCTAGGCCATTTCCTAGCTCCCGCCTTCTCTCCAGG

1230 1240 1250 1260 1270 1280 1290 1300 1310
AATTATCGGGGGTGAATATGACCAAGACCAACTTCCCTATGTTGGAGACCAATCAGTTCACTCATTCTGCTGCTGGGGAGACGCCAGC

1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
CAGTTACCTCCACTGAGACCAGGCTTTGATCCAGTTGGGCCACTTCCAGGACCTAACCCCATCTTGCCAGGGCGAGGGCGGCCCAATGACAGAT

1420 1430 1440 1450 1460 1470 1480 1490 1500
TTCCCTTTAGACCCAGCAGGGGTGGCCAACTGATGGCCGCTGTCAATCATGTGATTGATTGTAAATTCATTTCGGAGCTCCATTGTGTTTT

1510 1520 1530 1540 1550 1560 1570 1580 1590
TGTTTCTAAACTACAGATGTCACCTCTTGGGGTCTGATCTCGAGTGTATTTTCTGATTGTGGTGTGAGAGTTGCACTCCACAGAAACCTTTT

1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
AAGAGATACATTTATAGCCCTAGGGGTGGTATGACCAAGGTTCCTCTGTGACAAGGTTCGCCCTTGGGAATAGTTGGCTGCCAATCTCCCTGC

1700 1710 1720 1730 1740 1750 1760
TCTTGGTTCTCTCTAGATTGAAGTTGTTTTCTGATGCTGTTCTTACCAGATTAAAAAAGTGTAAATT

FIG. 10B

10 20 30 40 50 60
ETSKLG*SAVLAPAAGGTLSSSEGRSAVSGILIAVTSTGVDK*SLNQLLHGLGTSSRLSHF

70 80 90 100 110 120
PFG*KSPPRGQFVAAAVEIAGRSGLQMGQGLWRVVRNQQLQQEGYSEQGYLTREQSRRMA

130 140 150 160 170 180
ASNISNTNHRKQVQGGIDYHLLKARKSKEQEGFINLEMLPPELSFTILSYLNATDLCLA

190 200 210 220 230 240
SCVWQDLANDELLWQGLCKSTWGHCSIYNKNPPLGFSFRKXYMQLDEGSLTFNANPDEGV

250 260 270 280 290 300
NYFMSKGILDDSPKEIAKFIFCTR TLNWKLR IYLDERRDVLDDLVT LHNFRNQFLPNAL

310 320 330 340 350 360
REFFRHIHAPEEERGEYLETLITKFSHRFCACNPDL MRELGLSPDAVYVLCYSLILLSIDL

370 380 390 400 410 420
TSPHVKNKMSKREFIRNTRRAAQNISEDFVGHL YDNIYLIGHVAA*KAQLLGLQFLLQTK

430 440 450 460 470 480
ATQGLSRYGGYISAGHCSLSIQSSFSVQPFLLPFSILVISLGN*IILQNFS*FCLSRFA

490 500 510 520 530 540
QSRATV*HSC*RMIN*HYTLKDG VEVH*ICLKNFIHFHSLYKYHVMCTYLTKEIYSHNYF

550 560 570 580 590 600
IVKILTKVFPFLSN*VLKFI*F*SETIVXVKVRSDFRQKPIPASFSFKL*RVLICYYITM

610 620 630 640 650
QNWQLFL*YKFII*FFILKTGLIKSR*VL*TI*DF*NIKIYDLHS*E*NKIXLELW

FIG. 11A

10 20 30 40 50 60 70 80 90
GGAAACGTCAAAATGGGATAGTCGGCAGTTCTGGCCCCCTGCAGCTGGAGGTACCCCTGAGTTCTGAGGTCGTAGTCTGTTCTGGTATCTC
100 110 120 130 140 150 160 170 180
ATCGCGCTCACTCTACCGGTGTGGACAAGTAAAGTTTGAATCAGCTTCTCCATGGCTGGGCACCAGTTCCCGGCTGAGCCATTTTCTTTTG
190 200 210 220 230 240 250 260 270 280
GCTAAAGTCCCGCCAGAGGCCAATTCTGTCGGCGGGCGGTGGAGATGCGAGGTCGCTCAGGCTTGCGAGATGGGTCAAGGGTTGTGGAGAGT
290 300 310 320 330 340 350 360 370
GGTCAGAAACCAGCAGCTGCAACAAGAGGCTACAGTGAGCAAGGCTACCTCAACCAGAGAGCAGAGCAGGAGAATGGCTGCGAGCAACATTTCT
380 390 400 410 420 430 440 450 460 470
AACACCAATCATCGTAAACAAGTCCAAGGAGGCATTGACATATATCATCTTTTGAAGCAAGGAAATCGAAAGAAGCAGGAAGGATTCAATTAAT
480 490 500 510 520 530 540 550 560
TGCAATGTTCCTCTGAGCTAAGCTTTACCATCTTGTCTACCTGAATGCAACTGACCTTTGCTTGGCTTCATGTGTTTGGCAGGACCTTGC
570 580 590 600 610 620 630 640 650
GAATGATGAACCTCTCTGCAAGGGTTGTGCAAAATCCACTTGGGGTCACTGTTCCATATACAATAAGAACCACCTTTAGGATTTTCTTTTAGA
660 670 680 690 700 710 720 730 740 750
AAATGTATATGCACTGGATGAAGGCAGCCTCACCTTTAATGCCAACCCAGATGAGGGAGTGAACCTACTTTATGTCGAAGGGTATCCTGGATG
760 770 780 790 800 810 820 830 840
ATTGCCCAAAGGAATAGCAAAAGTTTATCTTCTGTACAAGAACTAAATGGAAAAAAGTGAATCTATCTTGATGAAGGAGAGATGTCTT
850 860 870 880 890 900 910 920 930 940
GGATGACCTTGTAACATTGCATAATTTTAGAAATCAGTTCTTGCCAAATGCACTGAGAGAATTTTTTCGTATATCCATGCCCTGAAGAGCGT
950 960 970 980 990 1000 1010 1020 1030
CGAGAGTATCTTGAACCTCTTATAACAAAGTTCTCACATAGATTCTGTGCTTGCAACCCTGATTTAATGCGAGAAGTTGGCCTTAGTCTGATG
1040 1050 1060 1070 1080 1090 1100 1110 1120
CTGCTATGTACTGTGCTACTCTTTGATTCTACTTTCCATTGACCTCACTAGCCCTCATGTGAAGAATAAAATGCAAAAAGGGGAATTTATTCG
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
AAATACCCGTCGCCGTGCTCAAAATATTAGTGAAGATTTGTAGGGCATCTTTATGACAATATCTACCTTATTGGCCATGTGGCTGCATAAAA
1230 1240 1250 1260 1270 1280 1290 1300 1310
GCACAATTGCTAGGACTTCAGTTTTTACTTCAGACTAAAGCTACCCAAGGACTTAGCAGATATGGGGTTACATCAGTGTGCTGATTTAGTATGCC
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
TGAGTATACAATCAAGCTTCAGTGTGCAACCTTTTCTTTTCTTTTCCATTCTTATTTAGTAATTTCTTTGGGAACTAAATAATTTGCAGAA
1420 1430 1440 1450 1460 1470 1480 1490 1500
TTTTTCTAATTTTGTATTATCAGTTTTCACAAAGCAGAGCCACTGTCTAACACAGCTGTTAACGAATGATAAAGTGACATTATACTCTAAAA
1510 1520 1530 1540 1550 1560 1570 1580 1590
GATGGTGTATTGTGCATTAGATTTCCTGAAAACTTTATCCATTTCATTCTTTATACAAATACCATGTAATGTGTACATATTTAACTAAAG
1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
AGATTTATAGTCATAATTATTTTATTGTAAAGATTTTAACTAAAGTTTTCTCTCTCAAACTGAGTTCTGAAATTTATTTGATTCTGATC
1700 1710 1720 1730 1740 1750 1760 1770 1780
TGAAACTATTGTCTYCGTAAAGTTAGATCTGACTTCAGRCAGAAACCAATACCAGCTTCCTTTTCTTTAACTTTGAAGAGTGTGATTGTG
1790 1800 1810 1820 1830 1840 1850 1860 1870 1880
TACTATATTACTATGCAAAACTGGCAGTTATTTTATAATATAAATTTATAATTTGATTTTTATTTTAAAACTGGGTAAATCAAGCTCTCGGT
1890 1900 1910 1920 1930 1940 1950 1960 1970
AAGTCCCTTTAAACCATTTAGGATTTTAAAAACATCAAAATTTATGATTACATTATAGGAATAAAATAAATATYATTAGAACTCTGGT

FIG. 11B

10 20 30 40 50 60
MAAAAVDSAMEVVPALAEAAPEVAGLSCLVNLPGEVLEYILCCGSLTAADIGRVSSTCR
70 80 90 100 110 120
RLRELCQSSGKVWKEQFRVRWPSLMKHYSPTDYVNWLEEYKVRQKAGLEARKIVASFSCR
130 140 150 160 170 180
FFSEHVPCNGFSDIENLEGPEIFFEDELVCILNMEGRKALTWKYYAKKILYYLRQQKILN
190 200 210 220 230 240
NLKAFLLQPPDDYESYLEGAVYIDQYCNPLSDISLKDIQAQIDSIVELVCKTLRGINSRHP
250 260 270 280 290 300
SLAFKAGESSMIMEIELQSQVLDAMNYVLYDQLKFKGNRMDYYNALNLYMHQVLIRRTGI
310 320 330 340 350 360
PISMSLLYLTIARQLGVPLEPVNFP SHFLLRWCQGAEGATLDIFDYIYIDAFGKGKQLTV
370 380 390 400 410 420
KECEYLIGQHVTAAALYGVVNVKKVLQRMVGNLLSLGKREGIDQSYQLLRDSL DLYLAMYP
430 440 450 460 470 480
DQVQLLLLQARLYFHLGIWPEKVL DILQHIQTLDPGQHGA VG YLVQHTLEHIERKKEEVG
490 500 510 520 530 540
VEVKLRSDCKHRDVCYSIGLIMKHKRYGYN CVIYGWDPTCMMGHEWIRNMNVHSLPHGHH
550 560 570 580 590 600
QPFYNVLVEDGSCRYAAQENLEYNVEPQEISHPDVGRYFSEFTGTHYIPNAELEIRYPED
610 620
LEFVYETVQNIYSAKKENIDE

FIG. 12A

FIG. 12B

10 20 30 40 50 60
RSTGFRRAGEWSR*XLAASPGXLRRPAXTFVLSNLAEVVERVLTFLLPAKALLRVACVCR
70 80 90
LWRECVRRVLRTHRSVTWISAGLAEAGHLXGH

FIG. 13A

10 20 30 40 50 60
CCGTAGTACTGGNTTCCGGCGGGCTGGTGAGGAATGGAGCCGGTAGNTGCTTGCGGCGAG
70 80 90 100 110 120
TCCCGGGNTCCTCCGTAGACCCGCGGANACCTTCGTGTTGAGTAACCTGGCGGAGGTGGT
130 140 150 160 170 180
GGAGCGTGTGCTCACCTTCCTGCCCCGCCAAGGCGTTGCTGCGGGTGGCCTGCGTGTGCCG
190 200 210 220 230 240
CTTATGGAGGGAGTGTGTGCGCAGAGTATTGCGGACCCATCGGAGCGTAACCTGGATCTC
250 260 270
CGCAGGCCTGGCGGAGGCCGCGCCACCTGGNNGGGGCATT

FIG. 13B

10 20 30 40 50 60
RPRPVQQQQQQPPQQPPPPQQPPQQPPPPPPQQQQQQPPPPPPPPPLPQERNNVG
70 80 90 100 110 120
ERDDDVPA DMVAEESGPGAQNSPYQLRRKTL LPKRTACPTKNSMEGASTSTTENFGHRAK
130 140 150 160 170 180
RARVSGKSQDLSAAPAEQYLQEKLPDEVVLKIFS YLLEQDLCRAACVCKRFSELANDPNL
190
WKRL YMEVF EYTRPMMH

FIG. 14A

10 20 30 40 50 60
GCGGCCGCGCCCGGTGCAGCAACAGCAGCAGCAGCCCCCGCAGCAGCCGCGCCGCGCAGCC

70 80 90 100 110 120
GCCCCAGCAGCAGCCGCCCCAGCAGCAGCCTCCGCCGCCGCCGCGCAGCAGCAGCAGCAGCA

130 140 150 160 170 180
GCAGCCTCCGCCGCCGCCACCGCCGCCCTCCGCCCTGCCTCAGGAGCGGAACAACGTCGG

190 200 210 220 230 240
CGAGCGGGATGATGATGTGCCTGCAGATATGGTTGCAGAAGAATCAGGTCCTGGTGCACA

250 260 270 280 290 300
AAATAGTCCATACCAACTTCGTAGAAAACTCTTTGCCGAAAAGAACAGCGTGTCAC

310 320 330 340 350 360
AAAGAACAGTATGGAGGGCGCCTCAACTTCAACTACAGAAAACCTTGGTCATCGTGCAA

370 380 390 400 410 420
ACGTGCAAGAGTGTCTGGAAAATCACAAGATCTATCAGCAGCACCTGCTGAACAGTATCT

430 440 450 460 470 480
TCAGGAGAACTGCCAGATGAAGTGGTTCTAAAAATCTTCTTACTTGCTGGAACAGGA

490 500 510 520 530 540
TCTTTGTAGAGCAGCTTGTGTATGTAAACGCTTCAGTGAACCTTGCTAATGATCCCAATTT

550 560 570 580 590
GTGGAAACGATTATATATGGAAGTATTTGAATATACTCGCCCTATGATGCAT

FIG. 14B

10 20 30 40 50 60
RPRPGLRGGRAPCEVTMEAGGLPELEWRMILAYLHLPDLGRCSLVCRAWYELILSLDSTR
70 80 90 100 110 120
WRQLCLGCTECRHPNWPNQPDVEPESWREAFKQHYLASKTWTKNALDLESSICFSLFRRR
130 140 150 160 170
RERRTLVGPGREFDSLGSALAMASLYDRIVLFPGVYEEQGEIILKVPVEIVGQGKLG

FIG. 15A

10 20 30 40 50 60
GCGGCCGCGGCCCGGACTCCGCGGTGGGCGAGCGCCCTGTGAGGTGACCATGGAGGCTGG
70 80 90 100 110 120
TGGCCTCCCCTTGGAGCTGTGGCGCATGATCTTAGCCTACTTGCACCTTCCCGACCTGGG
130 140 150 160 170 180
CCGCTGCAGCCTGGTATGCAGGGCCTGGTATGAACTGATCCTCAGTCTCGACAGCACCCG
190 200 210 220 230 240
CTGGCGGCAGCTGTGTCTGGGTTGCACCGAGTGCCGCCATCCCAATTGGCCCAACCAGCC
250 260 270 280 290 300
AGATGTGGAGCCTGAGTCTTGGAGAGAAGCCTTCAAGCAGCATTACCTTGCATCCAAGAC
310 320 330 340 350 360
ATGGACCAAGAATGCCTTGGACTTGGAGTCTTCCATCTGCTTTTCTCTATTCCGCCGGAG
370 380 390 400 410 420
GAGGGAACGACGTACCCTGAGTGTGGGCCAGGCCGTGAGTTTGACAGCCTGGGCAGTGC
430 440 450 460 470 480
CTTGGCCATGGCCAGCCTGTATGACCGAATTGTGCTCTTCCCAGGTGTGTACGAAGAGCA
490 500 510 520 530
AGGTGAAATCATCTTGAAGGTGCCTGTGGAGATTGTAGGGCAGGGGAAGTTGGGTGA

FIG. 15B

10 20 30 40 50 60
ETETAPLTLESLPTDPLLLILSFLDYRDLINCCYVSRRLSQLSSHDPWRRHCKKYWLIS
70 80 90 100 110 120
EEEKTQKNQCWKSLEFIDTYSVGRYIDHYAAIKKASGMISRNIWSPGVLGWVLSLKEGCS
130 140 150 160 170 180
RGRPRCCGSADWAASFLDDYRCSYRIHNGQKLVGSWGYWEAWHCLITIVLKIC*TSIQLP
190 200 210 220 230 240
EIPAETGTEILSPFNFCIHTGLSQYIAVEAAEG*NKNEVFYQCQTVERVFKYGIKMCSDG
250
CINGMH*VFS

FIG. 16A

10 20 30 40 50 60
GAGACCGAGACGGCGCCGCTGACCCTAGAGTCGCTGCCCACCGATCCCCTGCTCCTCATC

70 80 90 100 110 120
TTATCCTTTTGGACTATCGGGATCTAATCAACTGTTGTTATGTCAGTCGAAGATTAAGC

130 140 150 160 170 180
CAGCTATCAAGTCATGATCCGCTGTGGAGAAGACATTGCAAAAAATACTGGCTGATATCT

190 200 210 220 230 240
GAGGAAGAGAAAACACAGAAGAATCAGTGTGGAAATCTCTCTTCATAGATACTTACTCT

250 260 270 280 290 300
GATGTAGGAAGATACATTGACCATTATGCTGCTATTAAAAAGGCCTCGGGAATGATCTCA

310 320 330 340 350 360
AGAAATATTTGGAGCCCAGGTGTCCTCGGATGGGTTTTATCTCTGAAAGAGGGGTGCTCG

370 380 390 400 410 420
AGAGGAAGACCTCGATGCTGTGGAAGCGCAGATTGGGCTGCAAGTTTCTGACGATTAT

430 440 450 460 470 480
CGATGTTTCATACCGAATTCACAATGGACAGAAGTTAGTTGGTTCCTGGGGTTATTGGGAA

490 500 510 520 530 540
GCATGGCACTGTCTAATCACTATCGTTCTGAAGATTTGTTAGACGTCGATACAGCTGCCG

550 560 570 580 590 600
GAGATTCCAGCAGAGACAGGGACTGAAATACTGTCTCCCTTTAACTTTTGCATACATACT

610 620 630 640 650 660
GGTTTGAGTCAGTACATAGCAGTGAAGCTGCAGAGGGTTGAAACAAAAATGAAGTTTTC

670 680 690 700 710 720
TACCAATGTCAGACAGTAGAACGTGTGTTTAAATATGGCATTAAAGATGTGTTCTGATGGT

730 740 750
TGTATAAATGGCATGCATTAGGTATTTTCAG

FIG. 16B

10 20 30 40 50 60
GSGFRAGGWPLTMPGKHQHFQEPEVGCCGKYFLFGFNIVFWVLGALFLAIGLWAWGEKGV
70 80 90 100 110 120
LSNISALTDLGGLDPVWLVCGSWRRHVGAGLCWAAIGALRENTFLLKFFXXFLGLIFFLE
LA

FIG. 17A

10 20 30 40 50 60
GGCTCCGGTTTCCGGGCCGGCGGGTGGCCGCTCACCATGCCCCGNAAGCACCAGCATTTTC

70 80 90 100 110 120
CAGGAACCTGAGGTTCGGCTGCTGCGGGAATACTTCCTGTTTGGCTTCAACATTGTCTTC

130 140 150 160 170 180
TGGGTGCTGGGAGCCCTGTTCTGGCTATCGGCCTCTGGGCCTGGGGTGAGAAGGGCGTT

190 200 210 220 230 240
CTCTCGAACATCTCAGCGCTGACAGATCTGGGAGGCCTTGACCCCGTGTGGCTTGTTTGT

250 260 270 280 290 300
GGTAGTTGGAGGCGTCATGTCGGTGCTGGGCTTTGCTGGGCTGCAATTGGGGCCCTCCGG

310 320 330 340 350 360
GAGAACACCTTCCTGCTCAAGTTTTCTNCGNGTTCCTCGGTCTCATCTTCTTCTGAG

CTGGCAAC

FIG. 17B

10 20 30 40 50 60
AAAAAAYLDELPEPLLLRVLAALPAAELVQACRLVCLRWKELVDGAPLWLLKCQQEGGLVP
70 80 90 100 110 120
EGGVEEERDHWQQFYFLSKRRRNLLRNPCGEEDLEGWCDVEHGGDGWRVEELPGDSGVEF
130 140 150 160 170 180
THDES VKKYFASSFEWCRKAQVIDLQAEGYWEELD TTQPAIVVKDWYSGRSDAGCLYEL
190 200 210 220 230 240
TVKLLSEHENVLAEFSSGQVAVPQSDGGGWMEISHTFTDYGPGVRFVRFEGGGQGSVYW
250
KGWFGARVTNSSVWVEP*

FIG. 18A

10 20 30 40 50 60
GCGGCGGCGCGCGCGCTACCTGGACGAGCTGCCCGAGCCGCTGCTGCTGCGCGTGCTGGCCGCACTG
70 80 90 100 110 120 130
CCGGCCGCGCGAGCTGGTGCAGGCCTGCCGCTGGTGTGCCTGCGCTGGAAGGAGCTGGTGGACGGCGCC
140 150 160 170 180 190 200
CCGCTGTGGCTGCTCAAGTGCCAGCAGGAGGGGCTGGTGGCCGAGGGCGGCGTGGAGGAGGAGCGCGAC
210 220 230 240 250 260 270
CACTGGCAGCAGTTCTACTTCCTGAGCAAGCGGCGCCGCAACCTTCTGCGTAACCCGTTGGGGAAGAG
280 290 300 310 320 330 340
GACTTGGAAGGCTGGTGTGACGTGGAGCATGGTGGGGACGGCTGGAGGGTGGAGGAGCTGCCTGGAGAC
350 360 370 380 390 400 410
AGTGGGGTGGAGTTCACCCACGATGAGAGCGTCAAGAAGTACTTCGCCTCCTCCTTTGAGTGGTGTGCG
420 430 440 450 460 470 480
AAAGCACAGGTGATTGACCTGCAGGCTGAGGGCTACTGGGAGGAGCTGCTGGACACGACTCAGCCGGCC
490 500 510 520 530 540 550
ATCGTGGTGAAGGACTGGTACTCGGGCCGAGCGACGCTGGTTCCTCTACGAGCTCACCGTTAAGCTA
560 570 580 590 600 610 620
CTGTCCGAGCACGAGAACGTGCTGGCTGAGTTCAGCAGCGGGCAGGTGGCAGTGCCCCAAGACAGTGAC
630 640 650 660 670 680 690
GGCGGGGGCTGGATGGAGATCTCCACACCTTCACCGACTACGGGCGGGCGTCCGCTTCGTCCGCTTC
700 710 720 730 740 750
GAGCACGGGGGGCAGGGCTCCGTCTACTGGAAGGGCTGGTTCGGGGCCCGGGTGACCAACAGCAGCGTG
760 770
TGGGTAGAACCCTGA

FIG. 18B

10 20 30 40 50 60
MGEKAVPLRRRRVKRSCPCSGSELGVEEKRGKGNPISIQLFPPPELVEHIISFLPVRDLV
70 80 90 100 110 120
ALGQTCRYFHEVCDGEGVWRRICRRLSPRLQDQDTKGLYFQAFGGRRRCLSKSVAPLLAH
130 140 150 160 170 180
GYRRLPTKDHVFILDYVGTLLFFLKNALVSTLGQMOWKRACRYVVLCRGAKDFASDPRCD
190 200 210 220 230 240
TVYRKLYVLATREPQEVVGTSSRACDCVEVYLQSSGQRVFKMTFHHSMTFKQIVLVGQ
250 260 270 280 290 300
ETQRALLLLTEEGKIYSLVVNETQLDQPRSYTVQLALRKVSHYLPHLRVACMTSNQSSTL
310
YVTDPILCSWLQPPWPGG

FIG. 19A

10 20 30 40 50 60
ATGGGCGAGAAGGCGGTCCCTTTGCTAAGGAGGAGCGGGTGAAGAGAAGCTGCCCTTCTTGTGGCTCG

70 80 90 100 110 120 130
GAGCTTGGGGTTGAAGAGAAGAGGGGAAAGGAAATCCGATTTCATCCAGTTGTTCCCCCAGAGCTG

140 150 160 170 180 190 200
GTGGAGCATATCATCTCATTCCTCCCAGTCAGAGACCTTGTTGCCCTCGGCCAGACCTGCCGCTACTTC

210 220 230 240 250 260 270
CACGAAGTGTGCGATGGGGAAGGCGTGTGGAGACGCATCTGTGCGAGACTCAGTCCGCGCCTCCAAGAT

280 290 300 310 320 330 340
CAGGACACGAAGGGCCTGTATTTCCAGGCATTGAGAGCCGCCCGATGTCTCAGCAAGAGCGTGGCC

350 360 370 380 390 400 410
CCCTTGCTAGCCACGGCTACCGCCGCTTCTTGCCACCAAGGATCACGTCTTCATTCTTGACTACGTG

420 430 440 450 460 470 480
GGGACCCTCTTCTTCCTCAAAAATGCCCTGGTCTCCACCCTCGGCCAGATGCAGTGGAAGCGGGCCTGT

490 500 510 520 530 540 550
CGCTATGTTGTGTTGTGTCGTGGAGCCAAGATTTGCCTCGGACCCAAGGTGTGACACAGTTTACCGT

560 570 580 590 600 610 620
AAATACCTCTACGTCTTGGCCACTCGGGAGCCGAGGAAGTGGTGGGTACCACCAGCAGCCGGGCCTGT

630 640 650 660 670 680 690
GACTGTGTTGAGGTCTATCTGCAGTCTAGTGGGCAGCGGGTCTTCAAGATGACATTCCACCACTCAATG

700 710 720 730 740 750
ACCTTCAAGCAGATCGTGCTGGTTGGTCAGGAGACCCAGCGGGCTCTACTGCTCCTCACAGAGGAAGGA

760 770 780 790 800 810 820
AAGATCTACTCTTTGGTAGTGAATGAGACCCAGCTTGACCAGCCACGCTCCTACACGGTTCAGCTGGCC

830 840 850 860 870 880 890
CTGAGGAAGGTGTCCCACTACCTGCCTCACCTGCGGTGGCCTGCATGACTTCCAACCAGAGCAGCACC

900 910 920 930 940 950
CTCTACGTCACAGATCCTATTCTGTGCTCTTGGCTACAACCACCTTGGCCTGGTGGATGA

FIG. 19B

10 20 30 40 50 60
RGGSEGRGRGREKRARGARRKRKQGGREARAADGEGGSGPGAEGARTRPREEAEGGGSV

70 80 90 100 110 120
EEGARGIIKGDGSGVAGKEAQGRKYGKEEWRVRARRREGARPGRVQGGQVWAYIPGT

130 140 150 160 170 180
GAAMAAAAREEEEEAAARESAACPAAGPALWRLPEVLLMHMCSYLDMRALGRLAQVYRWLW

190 200 210 220 230 240
HFTNCDLLRRQIAWASLNSGFTRLGTNLMTSVPVKVSQNWIVGCCREGILLKWRC SQMPW

250 260 270 280 290 300
MQLEDDALYISQANFILAYQFRPDGASLNRQPLGVSAGHDEDVCHFVLATSHIVSAGGDG

310 320 330 340 350 360
KIGLGKIHSTFAAKYWAHEQEVNVCVCKGGIISFGSRDRTAKVWPLASGQLGQCLYTIQT

370 380 390 400 410 420
EDQIWSVAIRPLLSSFVTGTACCGHFSPLKIWDLNSGQLMTHLDRDFPPRAGVLDVIYES

430 440 450 460 470 480
PFALLSCGYDTYVRYWDCRTSVRKCVMEWEEPHNSTLYCLQTDGNHLLATGSSFYSVVRL

490 500 510 520 530
WDRHQRACPHTFPLTSTRLGSPVYCLHLTKHLYAALSYNLHVLDIQNP*

FIG. 20A

10 20 30 40 50 60 70 80 90
CGAGGGGGAAGCGAAGGAAGGGGAAGAGGAAAGCGAGCGAGAGGGGCAAGCGGGAAGAGGAAGCAGGGCGGAAGGGGAAGCCCGGGCGG
100 110 120 130 140 150 160 170 180
CAGACGGCGAAGGAGGCAGCGGGCGGGGCTGAGGCGGGAGCGAGGACACGCCCAAGAGAGGAAGCAGAGGGAGGCGGAAGCGTGGAGGAAGG
190 200 210 220 230 240 250 260 270 280
GGCGAGAGGCATCATCAAGGAGATGAGGGGAGCGTAGGGGCGGGAAGAGGCACAAGGAAGAAAGTATGGGAAGGAGGAATGGAGGGTCAGG
290 300 310 320 330 340 350 360 370
CCTAGCGCGGCGGAGGGCGCCAGGCCGGGAAGAGTACAGGACAAGGAGGTGAGGTTTGGGCTACATCCCGGGACAGGGCGGGCCATGGCGG
380 390 400 410 420 430 440 450 460 470
CGGCAGCCAGGGAGGAGGAGGAGGCGGCTCGGGAGTCAGCCCGCTGCCCGGCTCGGGGGCCAGCGCTCTGGCGCTGCCGGAAGTGCTGCT
480 490 500 510 520 530 540 550 560
GCTGCACATGTGCTCTACCTCGACATGCGGGCCCTCGGGCCCTGCGCCAGGTGTACCGTGGCTGTGGCACTTCACCAACTGCGACCTGCTC
570 580 590 600 610 620 630 640 650
CGGGCCAGATAGCCTGGGCTCGCTCAACTCCGGCTTCACGCGGCTCGGCACCAACCTGTATGACAGTGTCCAGTGAAGGTGTCTCAGAACT
660 670 680 690 700 710 720 730 740 750
GGATAGTGGGGTCTGCCGAGAGGGGATTCTGCTGAAGTGGAGATGCAGTACAGTGCCTGGATGCAGTATAGAGGATGATGCTTTGTACATATC
760 770 780 790 800 810 820 830 840
CCAGGCTAATTTTCATCTCGGCTACCACTCCGTCAGATGGTGGCAGCTTGAACCGTCAGCCTCTGGGAGTCTCTGCTGGGCATGATGAGGAC
850 860 870 880 890 900 910 920 930 940
GTTTGCCACTTTGTGCTGGCCACCTCGCATATTGTCAGTGCAGGAGGAGATGGGAAGATTGGCCTTGGTAAGATTACAGCACTTCGCTGCCA
950 960 970 980 990 1000 1010 1020 1030
AGTACTGGGCTCATGAACAGGAGGTGAACGTGTGAGATTGCAAGGGGCGCATCATATCATTGGCTCCAGGGACAGGACGGCCAAGGTGTGGCC
1040 1050 1060 1070 1080 1090 1100 1110 1120
TTTGCCCTCAGGGCAGCTGGGGCAGTGTATTATACACCATCCAGACTGAAGACCAATCTGGTCTGTGCTATCAGGCCATTACTCAGCTCTTTT
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
GTGACAGGGACGGCTTGTGTGGGCACTTCTCACCCCTGAAAATCTGGGACCTCAACAGTGGGCAGCTGATGACACACTTGGACAGAGACTTTC
1230 1240 1250 1260 1270 1280 1290 1300 1310
CCCCAAGGGCTGGGGTGTGGATGTATATATGAGTCCCTTTCCGACTGCTCTCCTGTGGCTATGACACCTATGTTGGCTACTGGGACTGCCG
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
CACCAGTGTCCGGAATGTGTATGGAGTGGGAGGAGCCCCACAACAGCACCTGTACTGCTGCAGACAGATGGCAACCACTTGCTTGGCCACA
1420 1430 1440 1450 1460 1470 1480 1490 1500
GGTTCCTCTCTATAGCGTTGTACGGCTGTGGGACCGGCACCAAGGCGCTGCCCGCACACCTTCCCGCTGACGTGACCCGCGCTCGGCAGCC
1510 1520 1530 1540 1550 1560 1570 1580 1590
CTGTGTACTGCTGCATCTCACCACCAAGCATCTCTATGCTGGCTGTCTTACAACCTCCAGCTCTGGATATTCAAAACCGGTGA

FIG. 20B

10 20 30 40 50 60
LILTSVLLFQRHGYCTLGEAFNRDLFSSAIQDIRTFNYVVKLLQLIAKSQLTSLSGVAQK

70 80 90 100 110 120
NYFNILDKIVQKVLDDHHNPRLIKDLLQDLSSTLCILIRGVGKSVLVGNINIWICRLETI

130 140 150 160 170 180
LAWQQQLQDLQMTKQVNNGLTSLDLPLHMLNNILYRFS DGWDIITLGQVTPTLYMLSEDR

190 200 210 220 230 240
QLWKKLCQYHFAEKQFCRHLILSEKGHIEWKL MYFALQKHYPKEQYGD TLHF CRHCSIL

250 260 270
FWKDSGHPCTAADPDSCFTPVSPQHFIDLFKF

FIG. 21A

10 20 30 40 50 60
GCATTGCTATAATTTTACTATACTCTCATCTAAATCTAAAATCAGTCTTCAAAATAAAAACAAATTGTC

70 80 90 100 110 120 130
CTTTGCCAAAAATTTTTTAATCGCACAAATTAATGACATTAAGTCCAATTCTTTTGGCTAATTGAC

140 150 160 170 180 190 200
TAATTTTAACTTCTGTGTTGCTTTTCCAGAGGCATGGCTATTGCACCTTGGGAGAAGCCTTTAATCGGT

210 220 230 240 250 260 270
TAGACTTCTCAAGTGCAATTCAAGATATCCGAACGTTCAATTATGTGGTCAAAGTGTGTCAGCTAATTG

280 290 300 310 320 330 340
CAAAATCCCAGTTAACTTCATTGAGTGGCGTGGCACAGAAGAATTACTTCAACATTTTGGATAAAATCG

350 360 370 380 390 400 410
TTCAAAGGTTCTTGATGACCACCACAATCCTCGCTTAATCAAAGATCTTCTGCAAGACCTAAGCTCTA

420 430 440 450 460 470 480
CCCTCTGCATTCTTATTAGAGGAGTAGGGAAGTCTGTATTAGTGGGAAACATCAATATTTGGATTGCCC

490 500 510 520 530 540 550
GATTAGAACTATTCTCGCCTGGCAACAACAGCTACAGGATCTTCAGATGACTAAGCAAGTGAACAATG

560 570 580 590 600 610 620
GCCTCACCCCTCAGTGACCTTCCTCTGCACATGCTGAACAACATCCTATACCGGTTCTCAGACGGATGGG

630 640 650 660 670 680 690
ACATCATCACCTTAGGCCAGGTGACCCCCACGTTGTATATGCTTAGTGAAGACAGACAGCTGTGGAAGA

700 710 720 730 740 750
AGCTTTGTCAGTACCATTTTGTCTGAAAAGCAGTTTTGTAGACATTTGATCCTTTTCAGAAAAAGGTCATA

760 770 780 790 800 810 820
TTGAATGGAAGTTGATGTACTTTGCACTTCAGAAACATTACCCAGCGAAGGAGCAGTACGGAGACACAC

830 840 850 860 870 880 890
TGCATTTCTGTGCGCACTGCAGCATCTCTTTTGAAGGACTCAGGACAACCCCTGCACGGCGGCCGACC

900 910 920 930 940 950 960
CTGACAGCTGCTTCACGCCTGTGTCTCCGCAGCACTTCATCGACCTCTTCAAGTTTTAAGGGCTGCCCC

970 980 990 1000 1010 1020 1030
TGCCATCCCTATTGGAGATTGTGAATCCTGCTGTCTGTGCAGGGCTCATAGTGAGTGTCTGTGAGGTG

1040 1050 1060 1070 1080 1090 1100
GGTGGAGACTCCTCGGAAGCCCCGTCTCCAGAAAGCCTGGGAAGAACTGCCCTTCTGCAAAGGGGGGA

1110 1120 1130 1140 1150 1160 1170
CTGCATGGTTGCATTTTTCATCACTGAAAGTCAGAGGCCAAGGAATCATTCTACTTCTTTAAAAACTC

1180 1190 1200 1210
CTTCTAAGCATATTAATGTGAAATTTTGGCTACTCTCTC

FIG. 21B

10 20 30 40 50 60
YGSEGGSSSISSDVSSSTDHTPTKAQKNVATSESDLSMRTLSTPSPALICPPNLPGFQ

70 80 90 100 110 120
NGRGSSTSSSSITGETVAMVHSPPTRLTHPLIRLASRPQKEQASIDRLPDHSMVQIFSF

130 140 150 160 170 180
LPTNQLCRCARVCRRWYNLAWDPRLWRTIRLTGETINVDRALKVLTRRLCQDTPNVCLML

190 200 210 220 230 240
ETVTVSGCRRLTDRGLYTIAQCCPELRRELVSGCYNISNEAVFDVVS LCPNLEHLDVSGC

250 260 270 280 290 300
SKVTCISLTREASIKLSPLHGKQISIRYLDMTDCFVLEDEGLHTIAAHCTQLTHLYLRRC

310 320 330 340 350 360
VRLTDEGLRYLVIYCASIKELSVSDCRFVSDFGLREIAKLESRLRYLSIAHCGRVTDVGI

370 380 390 400 410 420
RYVAKYCSKLRYLNARGCEGITDHGVEYLAKNCTKLKSLDIGKCPLVSDTGLECLALNCF

430 440 450 460 470 480
NLKRLSLKSCESITGQGLQIVAANCFDLQTLNVQDCEVSVEALRFVKRHCKRCVIEHTNP

AFF

FIG. 22A

FIG. 22B

10	20	30	40	50	60
AAAPAPAPAPTPTPEEGPDAGWGDRIPLVQIFGLLVAADGMPFPLGRAARVCRRWQE					
70	80	90	100	110	120
AASQPALWHTVTLSSPLVGRPAKGGVKAEEKLLASLEWLMPNRFSQLQRLTLIHWKSQVH					
130	140	150	160	170	180
PVLKLVGECCPRLTFLKLSGCHGVTADALVMLAKACCQLHSLDLQHSMVESTAVVSFLEE					
190	200	210	220	230	240
AGSRMRKLWLTYSQTTAILGALLGCCPQLQVLEVSTGINRNSIPLQLPVEALQKGCPO					
250	260	270	280		
LQVLRLLNLMWLPKPPGRGVAPGPGFPSLEELCLASSTCNFVS					

FIG. 23A

10 20 30 40 50 60
TGCGGCGCGCCCGCACCCGACCCGGCACCCACGCCCAGCCCGAGGAAGGGCCCGACGCGGGCTGGGG

70 80 90 100 110 120 130
AGACCGCATTCCTTGGAAATCCTGGTGCAGATTTTCGGGTGTGTGGTGGCGGCGGACGGCCCCATGCC

140 150 160 170 180 190 200
CTTCCTGGGCAGGGCTGCGCGCGTGTGCCGCCGCTGGCAGGAGGCCGCTTCCCAACCCGCGCTCTGGCA

210 220 230 240 250 260 270
CACCGTGACCCTGTCGTCCCCGCTGGTCCGCCGGCCTGCCAAGGGCGGGGTCAAGGCGGAGAAGAAGCT

280 290 300 310 320 330 340
CCTTGCTTCCTGGAGTGGCTTATGCCCAATCGGTTTTACAGCTCCAGAGGCTGACCCTCATCCACTG

350 360 370 380 390 400 410
GAAGTCTCAGGTACACCCCGTGTGAAGCTGGTAGGTGAGTGCTGTCTCGGCTCACTTTCTCAAGCT

420 430 440 450 460 470 480
CTCCGGCTGCCACGGTGTGACTGCTGACGCTCTGGTCATGCTAGCCAAAGCCTGCTGCCAGCTCCATAG

490 500 510 520 530 540 550
CCTGGACCTACAGCACTCCATGGTGGAGTCCACAGCTGTGGTGAGCTTCTTGAGGAGGCAGGGTCCCG

560 570 580 590 600 610 620
AATGCGCAAGTTGTGGCTGACCTACAGCTCCAGACGACAGCCATCCTGGGCGCATTGTGGGCAGCTG

630 640 650 660 670 680 690
CTGCCCCCAGCTCCAGGTCTTGGAGGTGAGCACCGGCATCAACCGTAATAGCATTCCCCTTCAGCTGCC

700 710 720 730 740 750
TGTCGAGGCTCTGCAGAAAGGCTGCCCTCAGCTCCAGGTGCTGCGGCTGTTGAACCTGATGTGGCTGCC

760 770 780 790 800 810 820
CAAGCCTCCGGGACGAGGGGTGGCTCCCGGACCAGGCTTCCCTAGCCTAGAGGAGCTCTGCCTGGCGAG

830 840 850
CTCAACCTGCAACTTTGTGAGC

FIG. 23B

10	20	30	40	50	60
QHCSQKDTAELLRGLSLWNHAEERQKFFKYSVDEKSDKEAEVSEHSTGITHLPPEVMLSI					
70	80	90	100	110	120
FSYLN PQELCRCSQVSMKWSQLTKTGSLWKHLYPVHWARGDWYSGPATELDTPEPDDEWVK					
130	140	150	160	170	180
NRKDESRAFHEWDEDADIDEESESAEESIAISIAQMEKRLHGLIHNVL PYVGTSVKTLV					
190	200	210	220	230	240
LAYSSAVSSKMVRQILELCPNLEHLDLTQTDISDSAFDSWSWLGCCQSLRHLDLSGCEKI					
250	260	270	280	290	300
TDVALEKISRALGILTSHQSGFLKTSTSKITSTAWKNKDITMQSTKQYACLHDLTNKGIG					
310	320	330	340	350	360
EEIDNEHPWTKPVSSNFSTSPYVWMLDAEDLADIEDTVEWRRHRNVESLCVMETASNFSCS					
370	380	390	400	410	420
TSGCFSKDIVGLRTSVCWQQHCASPAFAYCGHSFCCTGTALRTMSSLPESSAMCRKAART					
430	440	450	460	470	480
RLPRGKDLIYFGSEKSDQETGRVLLFLSLSGCYQITDHGLRVLT LGGGLPYLEHLNLSCG					
490	500	510	520	530	540
LTITGAGLQDLVSACPSLNDEYFYCDNINGPHADTASGCQNLQCGFRACCRSGE*PLTS					
550	560	570	580	590	
DLCLLHLAEQAFFHALYS*HISCVNHPFLSVTCFGPIXYNFRNLNYQXIVML					

FIG. 24A

10 20 30 40 50 60 70 80 90
ACAACTGCTCTCAGAAAGGATACTGCAGAACTCCTTAGAGGTCTTAGCCTATGGAATCATGCTGAAGAGCGACAGAARTTTTTTAAATATTCC
100 110 120 130 140 150 160 170 180
GTGGATGAAAAGTCAGATAAAGAAGCAGAAGTGTGAGAACTCCACAGGTATAACCCATCTTCTCTCTGAGGTAATGCTGCTCAATTTTCAGCT
190 200 210 220 230 240 250 260 270 280
ATCTTAATCTCAAGAGTTATGTCGATGCAGTCAAGTAAGCATGAAATGGTCTCAGCTGACAAAAACGGGATCGCTTTGGAAACATCTTTACCC
290 300 310 320 330 340 350 360 370
TGTTCATTGGGCCAGAGGTGACTGCTATAGTGGTCCCGCAACTGAACTTGATACTGAACCTGATGATGAATGGGTGAAAAATAGGAAAGATGAA
380 390 400 410 420 430 440 450 460 470
AGTCGCTCTTTTCATGAGTGGGATGAAGATGCTGACATTGATGAATCTGAAGAGTCTGCGGAGGAATCAATTGCTATCAGCATTCACAAATGG
480 490 500 510 520 530 540 550 560
AAAAAGCTTTACTCCATGGCTTAATTCATAACGTTCTACCATATGTTGGTACTCTCTGTAATAAACCTTAGTATTAGCATACAGCTCTGCAGTTTC
570 580 590 600 610 620 630 640 650
CAGCAAAATGGTTAGGCAGATTTAGAGCTTTGTCTAACCTGGAGCATCTGGATCTTACCCAGACTGACATTTCAGATTCTGCATTTCAGAGT
660 670 680 690 700 710 720 730 740 750
TGGTCTTGGCTTGGTTGCTGCCAGAGTCTTCGGCATCTTGATCTGCTGCTGGTTGTGAGAAAAATCACAGATGTGGCCCTAGAGAAGATTTCCAGAG
760 770 780 790 800 810 820 830 840
CTCTTGGAAATCTGACATCTCATCAAAGTGGCTTTTTGAAAAACATCTACAAGCAAAATTACTTCAAAGTGGTGGAAAAATAAGACATTACCAT
850 860 870 880 890 900 910 920 930 940
GCAGTCCACCAAGCAGTATGCCGTGTTGCACGATTTAACTAACAGGGCATTGGAGAAGAAATAGATAATGAACACCCCTGGACTAAGCCTGTT
950 960 970 980 990 1000 1010 1020 1030
TCTTCGAGAAATTCACCTTCTCTTATGCTGATGTTAGATGCTGAAGATTTGGCTGATATTGAAGATACTGTGGAATGGAGACATAGAAATG
1040 1050 1060 1070 1080 1090 1100 1110 1120
TTGAAAGTCTTTGTGTAATGGAACAGCATCCAACCTTTAGTTGTTCCACCTCTGGTTGTTTTAGTAAGGACATTGTTGGACTAAGGACTAGTGT
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
CTGTTGGCAGCAGCATTGTGCTTCTCCAGCCTTTGCGTATTGTTGCTCACTCATTTTGTGTTACAGGAACAGCTTTAAGAAGTATGTCATCACTC
1230 1240 1250 1260 1270 1280 1290 1300 1310
CCAGAATCTTCTGCAATGTGTAGAAAAGCAGCAAGGACTAGATTGCCCTAGGGGAAAAGACTTAATTTACTTTGGGAGTGAAAAATCTGATCAAG
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
AGACTGGACGTGTACTTCTGTTTCTCAGTTTATCTGGATGTTATCAGATCACAGACCATGGTCTCAGGGTTTGGACTCTGGGAGGAGGGCTGCC
1420 1430 1440 1450 1460 1470 1480 1490 1500
TTATTTGGAGCACCTTAATCTCTCTGTTGCTTACTATAAATCGTGCAGGCTGCAGGATTGGTTTCAGCATGCTCTCTCTGAATGATGAA
1510 1520 1530 1540 1550 1560 1570 1580 1590
TACTTTTACTACTGTGACAAACATTAACGGTCTCTCATGCTGATACCGCAGTGGATGCCAGAATTTGCAGTGTGGTTTTCGAGCCTGCTGCCCT
1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
CTGGCGAATGACCCCTGACTTCTGATCTTTGTCTACTTCATTTAGCTGAGCAGGCTTCTTTTCATGCATTTACTCATAGCACATTTCTTTGTGT
1700 1710 1720 1730 1740 1750 1760 1770
TAACCATCCCTTTTTGAGCGTACTTGTTTTGGGCCATTNYTTACAACCTCAGAAATCTTAATTACCAGTGRATTGTAATGTTG

FIG. 24B

10 20 30 40 50 60
RVTSGCGLARGSSAMVFSNNDEGLINKKLPKELLRIFSFLDIVTLCRCAQISKAWNILA

70 80 90 100 110 120
LDGSNWQRIDLFNFQIDVEGRVVENISKRCVGFLRKLSLRGCIGVGDSSLKTFAQNCRNI

130 140 150 160 170 180
EHLNLNGCTKITDSTCYSLSRFCSKCLKHLXLTSCVSITNSSLKGISSEGCRLNLEYLNLSWC

190 200 210 220 230 240
DQITKDGIEALVRGCRGLKALLLRGCTQLEDEALKHIQNYCHELVSLNLQSCSRITDEGV

250 260 270 280 290 300
VQICRGCHRLQALCLSGCSNLTDASLTALGLNCPRLQILEAARCSHLTDAGFTLLARNCH

310 320 330 340 350 360
ELEKMDLEXCILITDSTLIQLSIHCPKLQALSLSHCELI XDDGILHLSNSTCGHERLRVL

370 380 390 400 410 420
ELDNCLLITDVALXHLENCRGLERLELYDCQQVTRAGIKRMRAQLPHVKVHAYFAPVTPP

430 440 450 460 470 480
TAVAGSGQRLCRCVIL*QQLPGPKG**GILSSRRPESS*PTPPSPNLLILHWERHLQFP

490 500 510 520 530 540
NRHLSRFKNGEDKKGFISNI*HHIVT*NMALT*LVLLLPSLMSSLTSTHLLL*YL*RLI

550
ILKTDQTGPASKYINCVQ*

FIG. 25A

10 20 30 40 50 60 70 80 90
TTTTACTGTACACAGTTGATGTATTTTGATGCTGGGCTGTCTGGTCTGTCTTGAGGATTATTAACTTTAGAGGTATCAGAGAAGCAAATGGG
100 110 120 130 140 150 160 170 180
TACTGGTGAGGCTGCTCATTAGGGAAGAGGGCAAAAGGAGCACTAGCTAGGTGAGAGCCATGTTTCAGGTCACAAATGTGATGTCAGATGTTGCT
190 200 210 220 230 240 250 260 270 280
TATAAATCCTTTCTTGTCTTCGCCATTCTTAAATCTTGATAGGTGCTGTGGGAACTGTAAATGCCTTTCCCAATGGAGAATCAACAGATTG
290 300 310 320 330 340 350 360 370
GGTGATGGTGAGTGGGTACAGGAAGACTCAGGTCTTCTAGAGGAAAGATGCTCATCACCCCTTNGGCCAGGCAGCTGCTGTCAGAGAATGA
380 390 400 410 420 430 440 450 460 470
CACAGCACCTGCACAGTCGCTGTCCACTTCTGCCACTGCTGTGGTGGGGTGACGGGAGCAAAGTAGGCGTGACTTTGACATGAGGGAGCTG
480 490 500 510 520 530 540 550 560
AGCCCGCATCCGCTTGATGCCCTGCACGGGTAACTGCTGGCAGTCGTACAGCTCGAGGCGCTCCAGGCTCGGCAGTTCTCTAGGTGTGCCAGG
570 580 590 600 610 620 630 640 650
GCCACATCAGTGATGAGGAGGAGTTGTCCAATCCAGTACCCGAGCCTCTCATGGCCACAGGTAAGTGTGCTCAGGTGCAGGATCCCATCAT
660 670 680 690 700 710 720 730 740 750
CTGKGATGAGTTACAGTGGGACAGGCTCAGGGCTTGCAAGTTAGGACAGTGAATGGAGAGCTGGATGAGTGTGCTGTGGTTATCAGGATGCA
760 770 780 790 800 810 820 830 840
WTCCTCAAGATCCATCTTCCCAATTCTGGCAATTCAGGCTAAAAGTGAACCTGCGTCAGTCAAAATGGGAGCATCGGGCAGCCTCCAAA
850 860 870 880 890 900 910 920 930 940
ATTTGACAGTCGCGGACAGTTCAAACCCAGGGCTGTAAGAGAGGCATCTGTGAGGTTGCTGCAACCCGAAAGGCAGAGAGCCTGTAGCCGGTGAC
950 960 970 980 990 1000 1010 1020 1030
AGCCCTGCATATCTGCACCAACACTTCATCCGTGATACGTGAGCAGGACTGCAAGTTGAGGCTCACAAGCTCATGGCAGTAATTCTGAATGTG
1040 1050 1060 1070 1080 1090 1100 1110 1120
TTTCAGAGCTTCATCTTCTAACTGTGTGTCAGCCCTCAGGAGCAGGGCTTTCAGGCTCGACAACCTCGCACCAAGTGCATGCCATCCTTC
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
GTGATCTGATCACACCAAGAGAGGTTACAGTACTCCAGGTTTCGGCAGCCCTCACTGATCCCTTCAAGGAGCTGTTTGTAAATAGACACACAGG
1230 1240 1250 1260 1270 1280 1290 1300 1310
AGGTCAGAWCCAGATGTTTCAGCTTGGAAACAGAACTCTGCTAAGGCTATAACACGTGCTGTGTCAGTGATTTTGTGTCATCCATTCAGGTTCAAATG
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
TTCAATGTTTCGGCAGTTCTGTCAAAGGCTTCAAGGAGGAATCCCCAACCAATCCAGCCTCGCAAGCTGAGCTTCTCAGGAATCCAACG
1420 1430 1440 1450 1460 1470 1480 1490 1500
CATCGCTTCGAGATATTTTCAACCACTCGACCTCTACATCTATTGAAAGTTAAAAAGATCTATTCTTTGCCAGTTGCTTCCATCCAGGGCTA
1510 1520 1530 1540 1550 1560 1570 1580 1590
AGATGTTCCAAGCCTTGGAAATCTGTGCACATCGGCACAAAGTTACTATATCCAAGAAGGAAAATATTCTTAACAGAAGTTCTTTGGGTAAGTT
1600 1610 1620 1630 1640 1650 1660 1670 1680
TTTGTAAATAAGGCCTTCATCATGTTTGTAGAAAACCATGGCCGAAGAGCGGAGCGAGCCACAGCCCGAAGTCACACGGC

FIG. 25B

10	20	30	40	50	60
MSPVFPMLTVLTMFYIICLRRRARTATRGEMTNTHRAIESNSQTSPLNAEVVQYAKEVVD					
70	80	90	100	110	120
FSSHYGSENSMSYTMWNLAGVPNVFPSSGDFTQTAVFRTYGTWWDQCPSASLPFKRTPPN					
130	140	150	160	170	180
FQSQDYVELTFEQQVYPTAVHVLETYHPGAVIRILACSANPYSPNPPAEVRWEILWSERP					
190	200	210	220	230	240
TKVNASQARQFKPCIKQINFPTNLIRLEVNSSLLEYYTELDAVVLHGVDKDPVLSLKTSL					
250	260	270	280	290	300
IDMNDIEDDAYAEKDGCMDSLNKKFSSAVLGEGPNNGYFDKLPYELIQLILNHLTLPLDL					
310	320	330	340	350	360
CRLAQTCCKLLSQHCCDPLQYIHLNLQPYWAKLDDTSLEFLQSRCTLVQWLNLSWTGNRGF					
370	380	390	400	410	420
ISVAGFSRFLKVCSELVRLELSCSHFLNETCLEVISEMCPNLQALNLSSCDKLPQAFN					
430	440	450	460	470	480
HIAKLCSLKRLVLYRTKVEQTALLSILNFCSELQHLSLGSCVMIEDYDVIA SMIGAKCKK					
490	500	510	520	530	540
LRTL DLWRCKNITENGIAELASGCPLLEELDLGWCPTLQSSTGCFTRLAHQLPNLQKLFL					
550	560	570	580	590	600
TANRSVCDTDIDELACNCTRLQQLDILGTRMVSPASLRKLLSCKDLSLLDVSFCSQIDN					
610	620				
RAVLELNASF PKVFIKKSFTQ					

FIG. 26A

10 20 30 40 50 60 70 80 90
ATGTCACCGGTCTTTCCCATGTTAACAGTTCTGACCATGTTTTATTATATATATGCCTTCGGCGCCGAGCCAGGACAGCTACAAGAGGAGAAATGA
100 110 120 130 140 150 160 170 180
TGAACACCCATAGAGCTATAGAATCAAAACAGCCAGACTTCCCCCTCTCAATGCAGAGGTAGTCCAGTATGCCAAAGAAGTAGTGGATTTCAGTTTC
190 200 210 220 230 240 250 260 270 280
CCATTATGGAAGTGAGAAATAGTATGTCTTACTATGTGGAATTTGGCTGGTGTACCAAAATGTATTCCCAAAGTTCTGGTGACTTTACTCAGACA
290 300 310 320 330 340 350 360 370
GCTGTGTTTCGAACCTTATGGGACATGGTGGGATCAGTGTCTAGTGTCTTCCCTTGCCATTCAAGAGGACGCCACCTAATTTTCAGAGCCAGGACT
380 390 400 410 420 430 440 450 460 470
ATGTGGAACCTTACTTTTGAACAACAGGTGTATCCTACAGCTGTACATGTTCTAGAAAACCTATCATCCCGGAGCAGTCATTAGAATTCGCGTTG
480 490 500 510 520 530 540 550 560
TTCTGCAAACTCCTTATTCCCCAAATCCACCAGCTGAAGTAAGATGGGAGATTCTTTGGTCAGAGAGACCTACGAAGGTGAATGCTTCCCAAAGCT
570 580 590 600 610 620 630 640 650
CGCCAGTTTAAACCTTGTATTAAACAGATAAAATTTCCCCCAAAATCTTATACGACTGGAAAGTAAATAGTTCTCTTCTGGAATATTACACTGAAT
660 670 680 690 700 710 720 730 740 750
TAGATGCAGTTGTCTACATGGTGTGAAGGACAAGCCAGTGCTTCTCTCAAGACTTCACCTTATTGACATGAATGATATAGAAGATGATGCCTA
760 770 780 790 800 810 820 830 840
TGCAGAAAAGGATGCTTGTGGAATGGACAGTCTTAACAAAAAGTTAGCAGTGCTGTCTCGGGGAAGGGCCAAATATAGGGTATTTTGATAAA
850 860 870 880 890 900 910 920 930 940
CTACCTTATGAGCTTATTAGCTGATTCTGAATCATCTTACACTACCAGACCTGTGTAGATTAGCACAGACTTGCAAACTACTGAGCCAGCATT
950 960 970 980 990 1000 1010 1020 1030
GCTGTGATCCTCTGCAATACATCCACCTCAATCTGCAACCATACTGGGCAAACTAGATGACACTTCTCTGGAATTTCTACAGTCTCGCTGCAC
1040 1050 1060 1070 1080 1090 1100 1110 1120
TCTTGTCCAGTGGCTTAATTTATCTTGGACTGGCAATAGAGGCTTCATCTCTGTTGTCAGGATTAGCAGGTTTCTGAAGGTTTGTGGATCCGAA
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
TTAGTACCCCTTGAATTGTCTTCCAGCCACTTTCTTAATGAAACTTGCTTAGAAGTTATTTCTGAGATGTGTCCAAATCTACAGGCCTTAAATC
1230 1240 1250 1260 1270 1280 1290 1300 1310
TCTCCTCTGTGATAAGCTACCACCTCAAGCTTTCAACCACATTGCCAAGTTATGCAGCCTTAAACGACTTGTCTCTATCGAACAAAAGTAGA
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
GCAACAGCACTGCTCAGCATTTTGAACCTTCTGTTTCAGAGCTTCAGCACCTCAGTTTAGGCAGTTGTGTCATGATTGAAGACTATGATGTGATA
1420 1430 1440 1450 1460 1470 1480 1490 1500
GCTAGCATGATAGGAGCCAAAGTGTAATAAACTCCGACCCCTGGATCTGTGGAGATGTAAGAATATTACTGAGAATGGAATAGCAGAACTGGCTT
1510 1520 1530 1540 1550 1560 1570 1580 1590
CTGGGTGTCCACTACTGGAGGAGCTTGACCTTGGCTGGTGGCCAACTCTGCAGAGCAGCACCGGGTGCTTCACCAGACTGGCACACCCAGCTCCC
1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
AACTTGCAAAAACCTTTCTTACAGCTAATAGATCTGTGTGTGACACAGACATTGATGAATTGGCATGTAATTGTACCAGGTTACAGCAGCTG
1700 1710 1720 1730 1740 1750 1760 1770 1780
GACATATTAGGAACAAGAATGGTAAGTCCGGCATCCTTAAGAAAACTCCTGGAATCTTGTAAGATCTTTCTTTACTTGATGTGTCTTCTGTT
1790 1800 1810 1820 1830 1840 1850 1860
CGCAGATTGATAACAGAGCTGTGCTAGAACTGAATGCAAGCTTTCCAAAAGTGTTCATAAAAAAGAGCTTTACTCAGTGA

FIG. 26B

10 20 30 40 50 60
MQLVPDIEFKITYTRSPDGDGVGNSYIEDNDDDSKMADLLSYFQQQLTFQESVLKLCQPE

70 80 90 100 110 120
LESSQIHISVLPMEVLMYIFRWVSSDLLRSLEQLSLVCRGFYICARDPEIWRLACLKV

130 140 150 160 170 180
WGRSCIKLVPYTSWREMFLERPRVRFDGVYISKTTYIRQGEQSLDGFYRAWHQVEYYRYI

190 200 210 220 230 240
RFFPDGHVMMLTTPEEPQSIVPRLRTRNTRTDAILLGHYRLSQDTDNQTKVFAVITKKKE

250 260 270 280 290 300
EKPLDYKYRYFRRVPVQEADQSFHVGLQLCSSGHQRFNKLIWIHHSCHITYKSTGETAVS

310 320
AFEIDKMYTPLFFARVRSYTAFSERPL

FIG. 27A

10 20 30 40 50 60
ATGCAACTTGATACCTGATATAGAGTTCAAGATTACTTATACCCGGTCTCCAGATGGTGATGGCGTTGGA
70 80 90 100 110 120 130
AACAGCTACATTGAAGATAATGATGATGACAGCAAAATGGCAGATCTCTTGTCTACTTCCAGCAGCAA
140 150 160 170 180 190 200
CTCACATTTTCAGGAGTCTGTGCTTAACTGTGTCAGCCTGAGCTTGAGAGCAGTCAGATTCACATATCA
210 220 230 240 250 260 270
GTGCTGCCAATGGAGGTCCTGATGTACATCTTCCGATGGGTGGTGTCTAGTGACTTGGACCTCAGATCA
280 290 300 310 320 330 340
TTGGAGCAGTTGTGCGTGGTGTGCAGAGGATTCTACATCTGTGCCAGAGACCCTGAAATATGGCGTCTG
350 360 370 380 390 400 410
GCCTGCTTGAAAGTTTGGGGCAGAAGCTGTATTAAACTTGTTCGTACACGTCCTGGAGAGAGATGTTT
420 430 440 450 460 470 480
TTAGAACGGCCTCGTGTTTCGGTTTGATGGCGTGATATCAGTAAAACCACATATATTCGTCAAGGGGAA
490 500 510 520 530 540 550
CAGTCTCTTGATGGTTTCTATAGAGCCTGGCACCAAGTGGAATATTACAGGTACATAAGATTCTTTCTCT
560 570 580 590 600 610 620
GATGGCCATGTGATGATGTTGACAACCCCTGAAGAGCCTCAGTCCATTGTTCCACGTTTAAGAAGTAGG
630 640 650 660 670 680 690
AATACCAGGACTGATGCAATTCTACTGGGTCACTATCGCTTGTACACAAGACACAGACAATCAGACCAA
700 710 720 730 740 750
GTATTTGCTGTAATAACTAAGAAAAAGAAGAAAACCACTTGACTATAAATACAGATATTTTCGTCGT
760 770 780 790 800 810 820
GTCCCTGTACAAGAAGCAGATCAGAGTTTTCATGTGGGGCTACAGCTATGTTCCAGTGGTCACCAGAGG
830 840 850 860 870 880 890
TTCAACAACTCATCTGGATACATCATCTTGTACATTACTTACAAATCAACTGGTGAGACTGCAGTC
900 910 920 930 940 950 960
AGTGCTTTTGAGATTGACAAGATGTACACCCCTTGTCTTCGCCAGAGTAAGGAGCTACACAGCTTTC
970 980
TCAGAAAGGCCTCTGTAG

FIG. 27B

10	20	30	40	50	60
AALDPDLENDFFVRKTGAFHANPYVLRAFEDFRKFSEQDDSVERRDIILQCREGELVLPD					
70	80	90	100	110	120
LEKDDMIVRRIPAQKKEVPLSGAPDRYHPVFFPEPWTLPPEIQAKFLCVLERTCPSKEKS					
130	140	150	160	170	180
NSCRILVPSYRQKKDDMLTRKIQSWKLGTTVPPISTPGPCSEADLKRWEAIREASRLRH					
190	200	210	220	230	240
KKRLMVERLFQKIYGENGSKSMSDVSAEDVQNLRLRYEEMQKIKSQLKEQDQKWQDDLA					
250					
KWKDRRKSYTSDLQK					

FIG. 28A

10 20 30 40 50 60
GCAGCCCTGGATCCTGACTTAGAGAATGATGATTTCTTTGTCAGAAAGACTGGGGCTTTCCATGCAAAT
70 80 90 100 110 120 130
CCATATGTTCTCCGAGCTTTTGAAGACTTTAGAAAAGTTCTCTGAGCAAGATGATTCTGTAGAGCGAGAT
140 150 160 170 180 190 200
ATAATTTTACAGTGTAGAGAAGGTGAACCTGTACTTCCGGATTGAAAAAGATGATATGATTGTTCCG
210 220 230 240 250 260 270
CGAATCCCAGCACAGAAGAAAGAAGTGCCGCTGTCTGGGGCCCCAGATAGATACCACCCAGTCCCTTTT
280 290 300 310 320 330 340
CCCGAACCTTGACTCTTCTCCAGAAATTCAAGCAAAATTTCTCTGTGTACTTGAAAGGACATGCCCA
350 360 370 380 390 400 410
TCCAAAGAAAAAGTAATAGCTGTAGAATATTAGTTCCTTCATATCGGCAGAAGAAAGATGACATGCTG
420 430 440 450 460 470 480
ACACGTAAGATTCAGTCCTGGAAACTGGGAACTACCGTGCCTCCCATCAGTTTCACNCCTGGCCCCCTGC
490 500 510 520 530 540 550
AGTGAGGCTGACTTGAAGAGATGGGAGGCCATCCGGGAGGCCAGCAGACTCAGGCACAAGAAAAGGCTG
560 570 580 590 600 610 620
ATGGTGGAGAGACTCTTCAAAAAGATTTATGGTGAGAATGGGAGTAAGTCCATGAGTGATGTCAGCGCA
630 640 650 660 670 680 690
GAAGATGTTCAAACTTGCCTCAGCTGCGTTACGAGGAGATGCAGAAAATAAAATCACAAATTAAAGAA
700 710 720 730 740 750
CAAGATCAGAAATGGCAGGATGACCTTGCAAAATGGAAAGATCGTCGAAAAAGTTACACTTCAGATCTG
760
CAGAAG

FIG. 28B

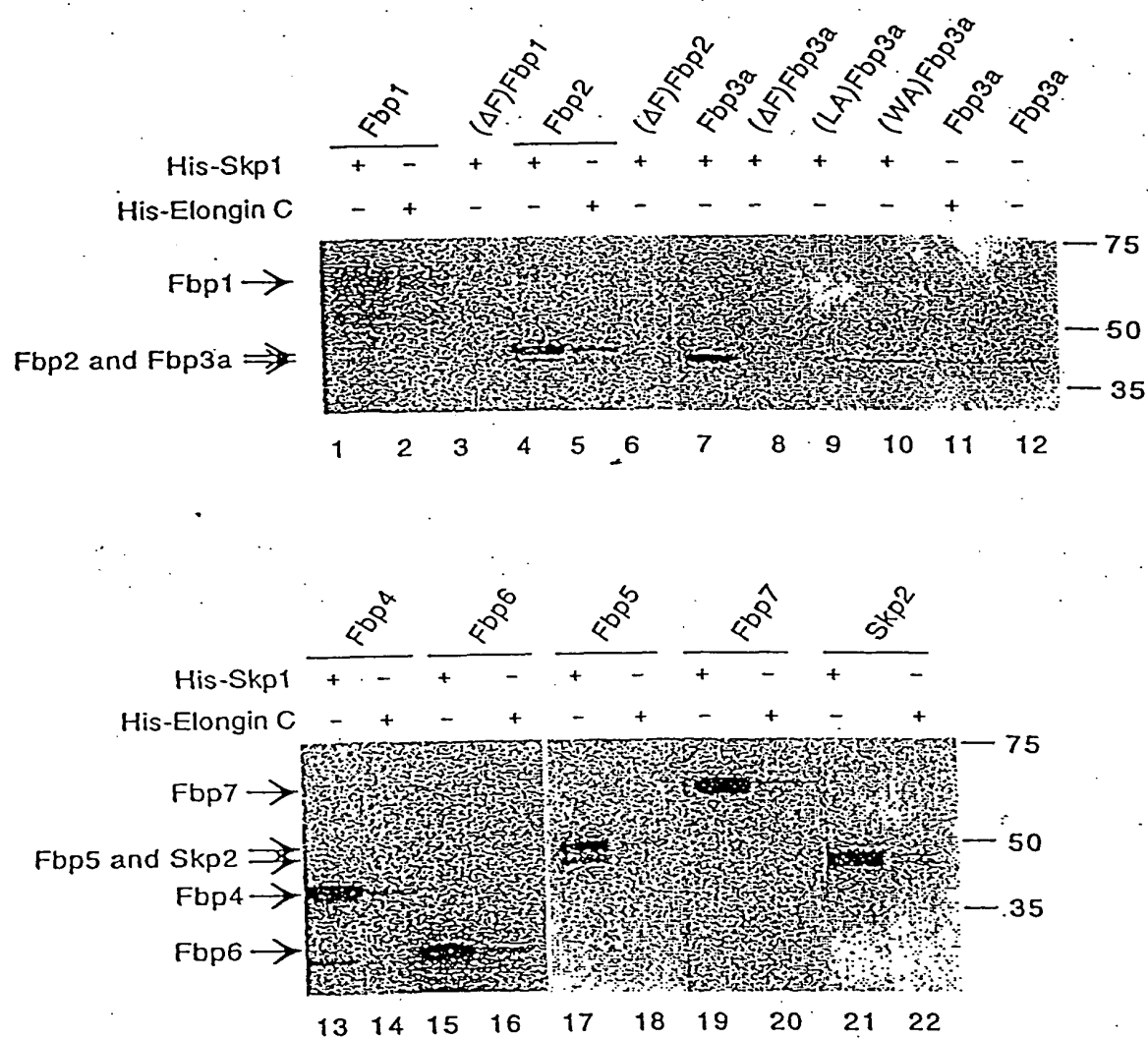


FIG. 29

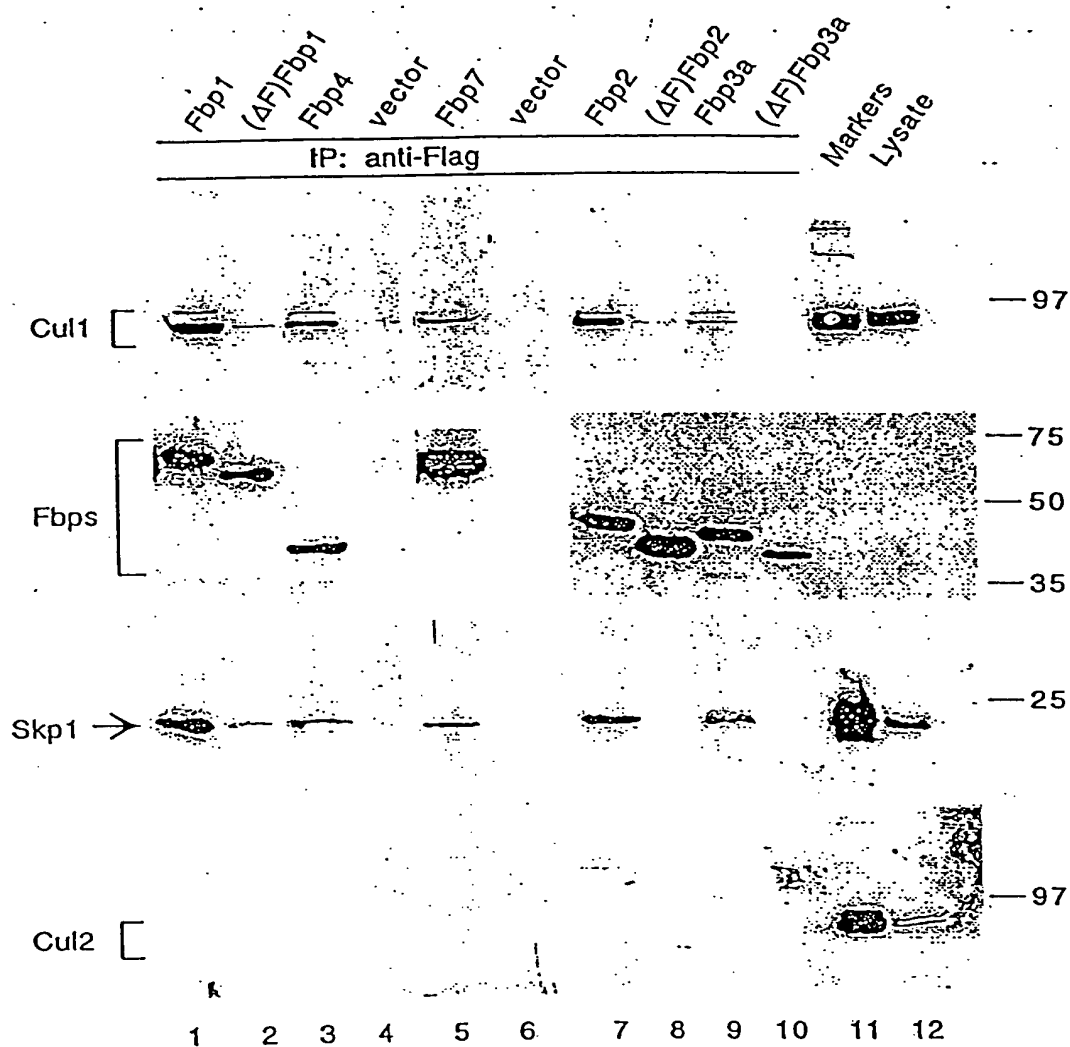


FIG. 30

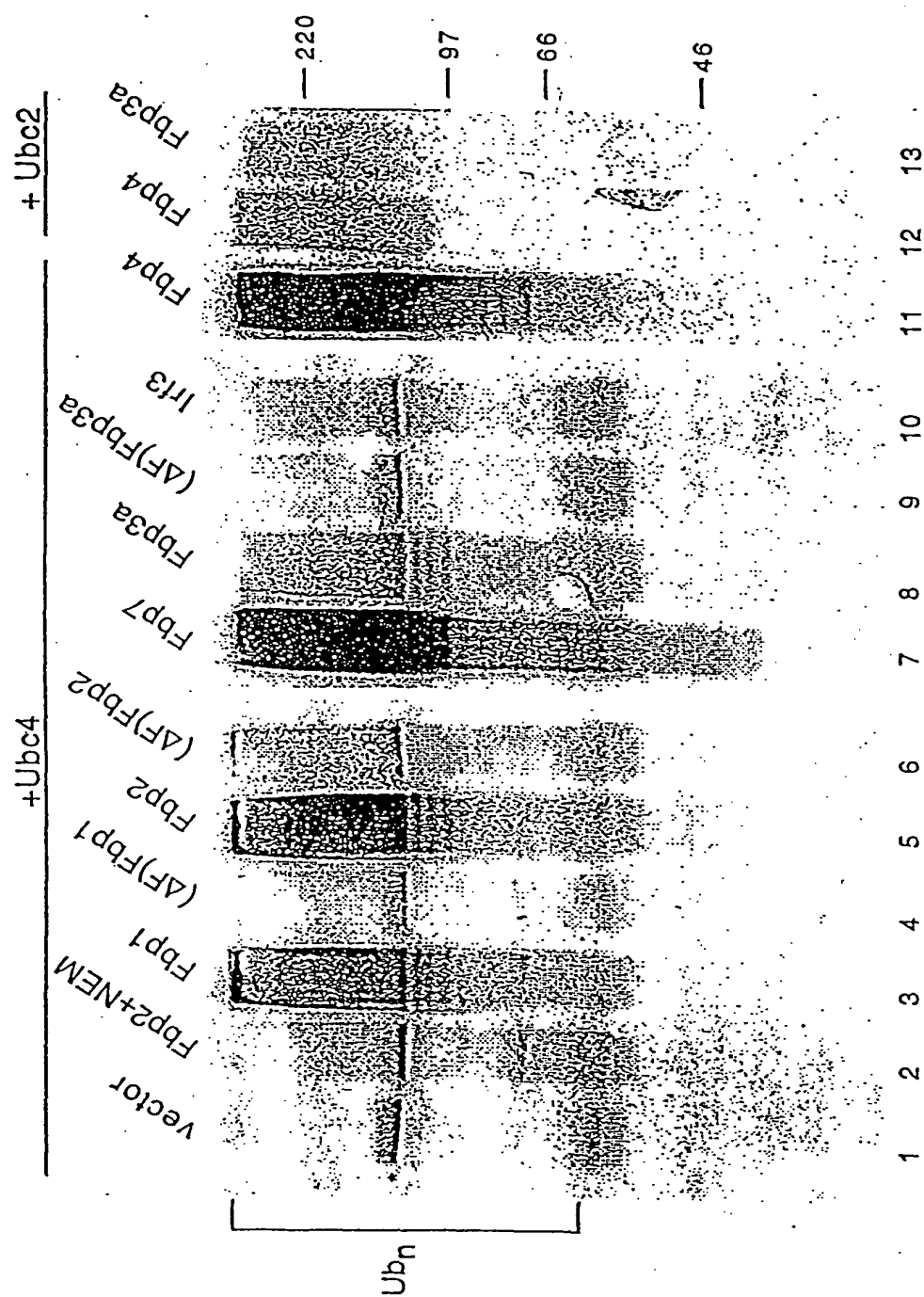


FIG. 31

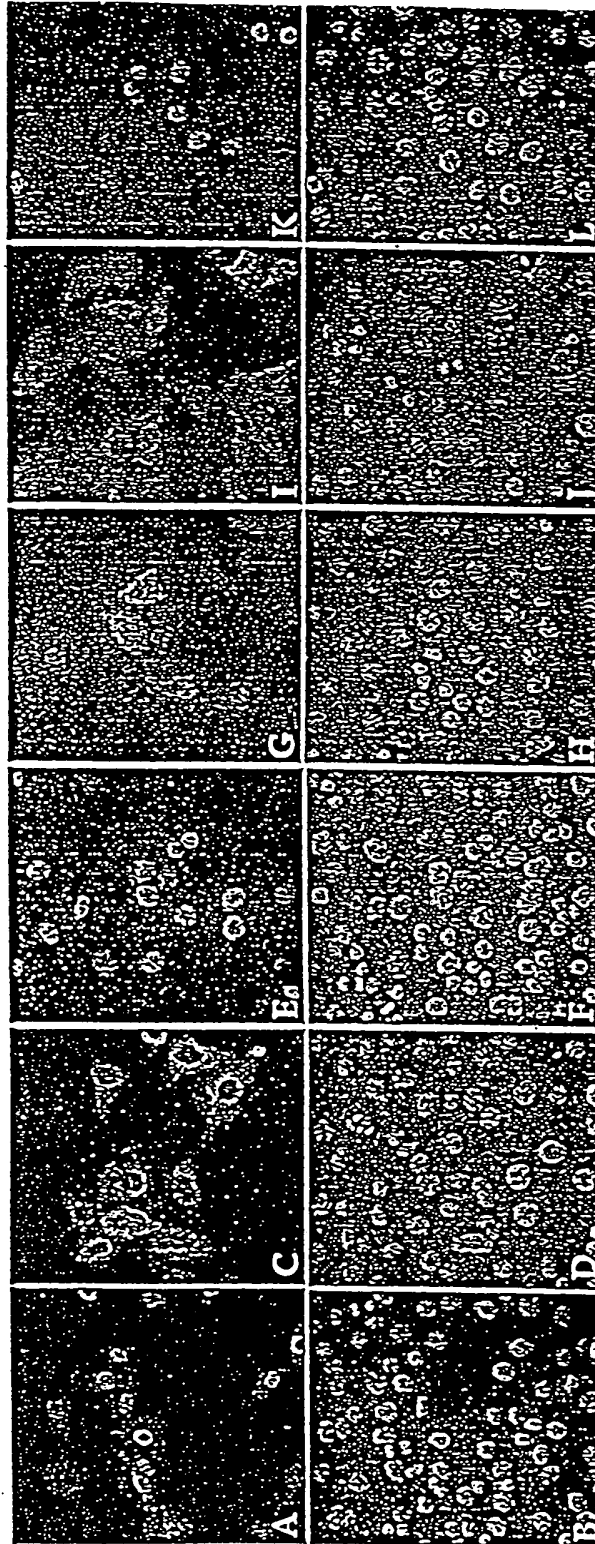


FIG. 32

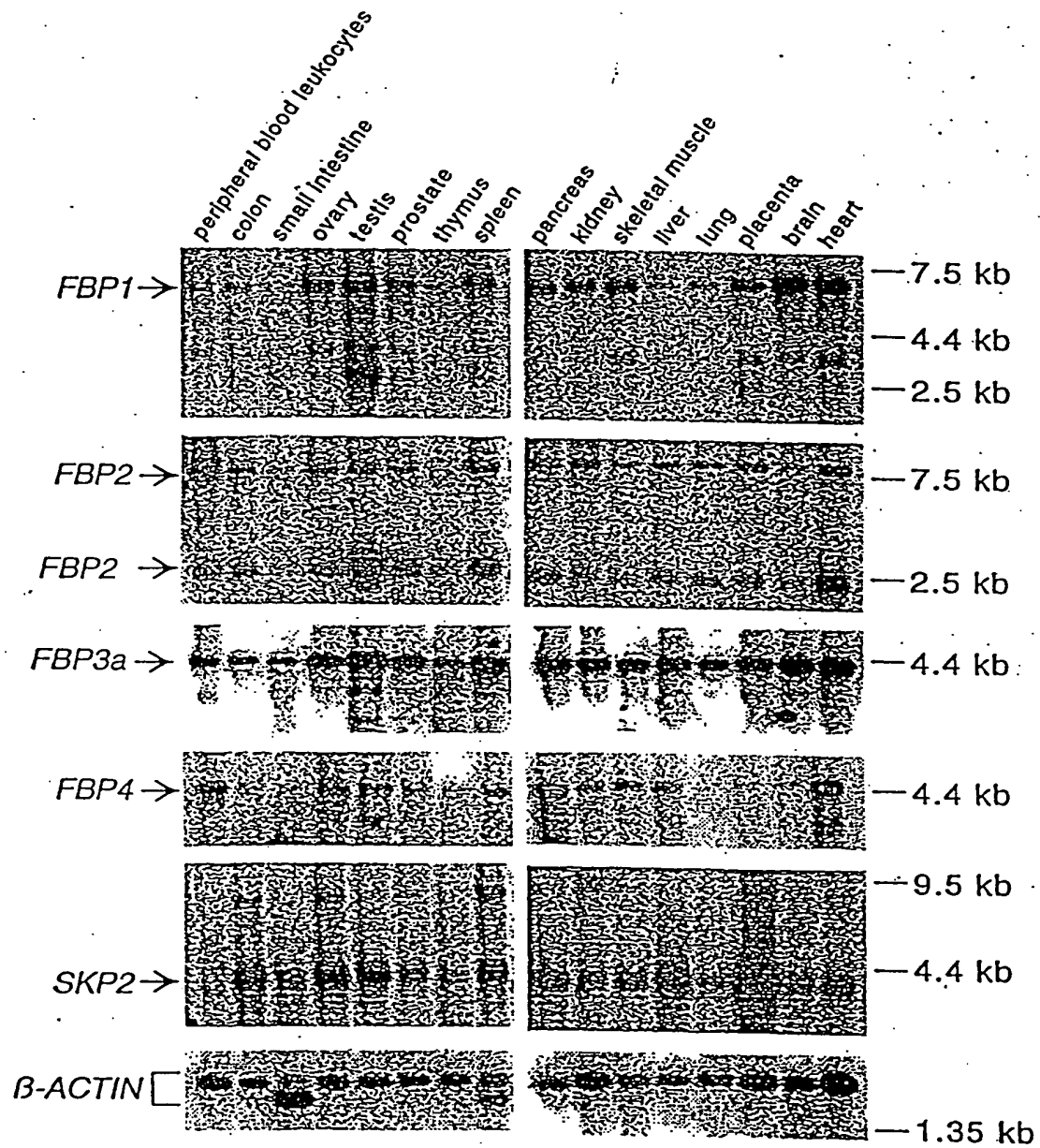


FIG. 33

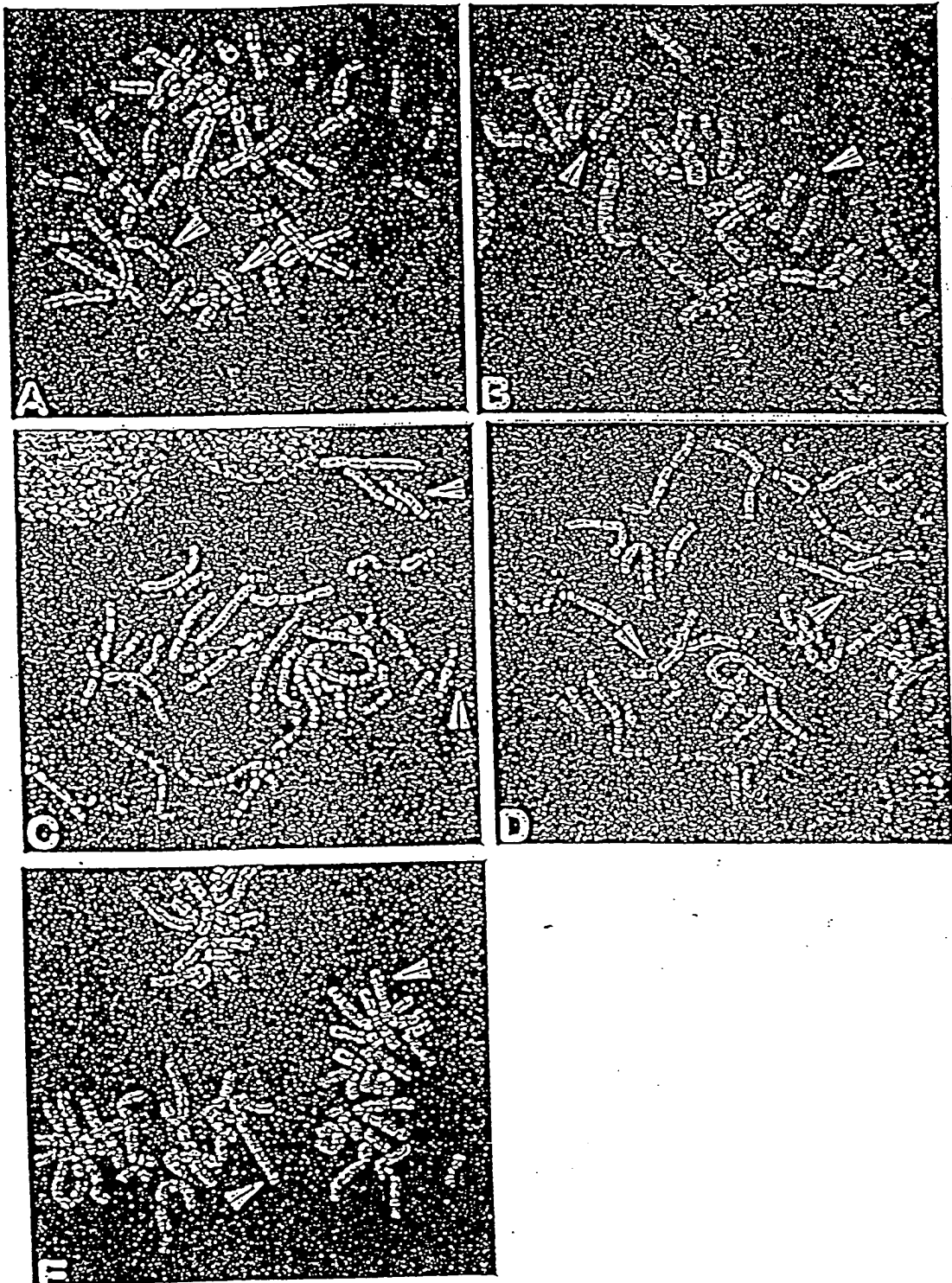


FIG. 34 A-E

5914-099

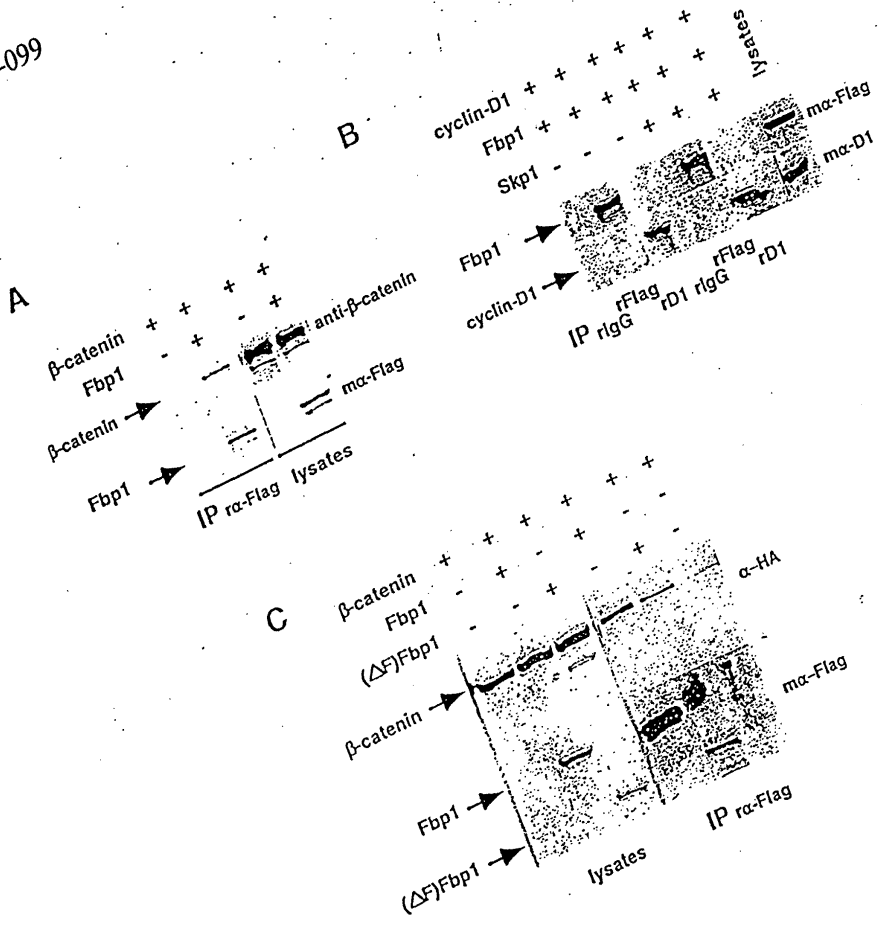


FIG. 35 A-C

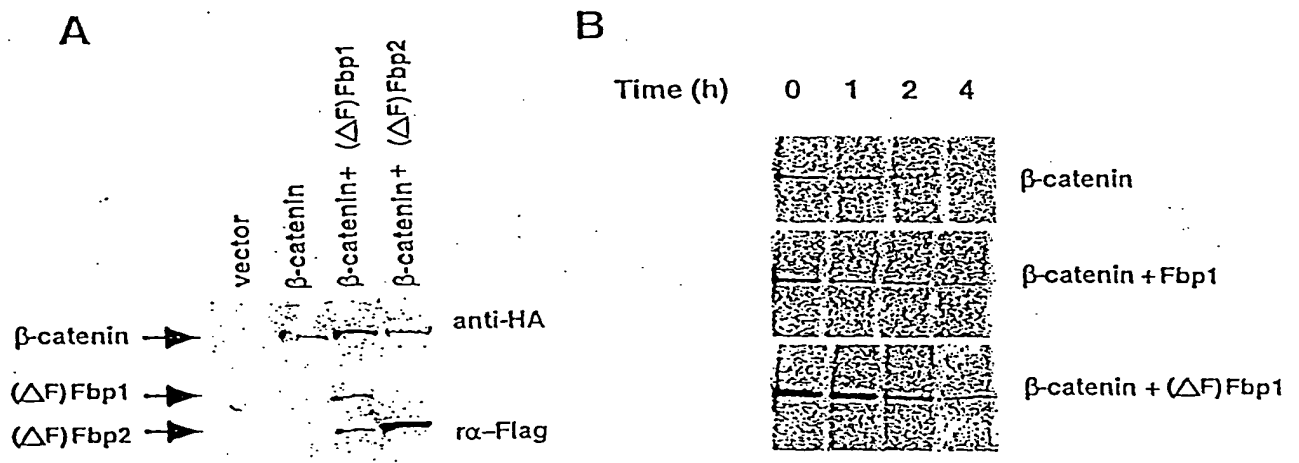


FIG. 36 A-B

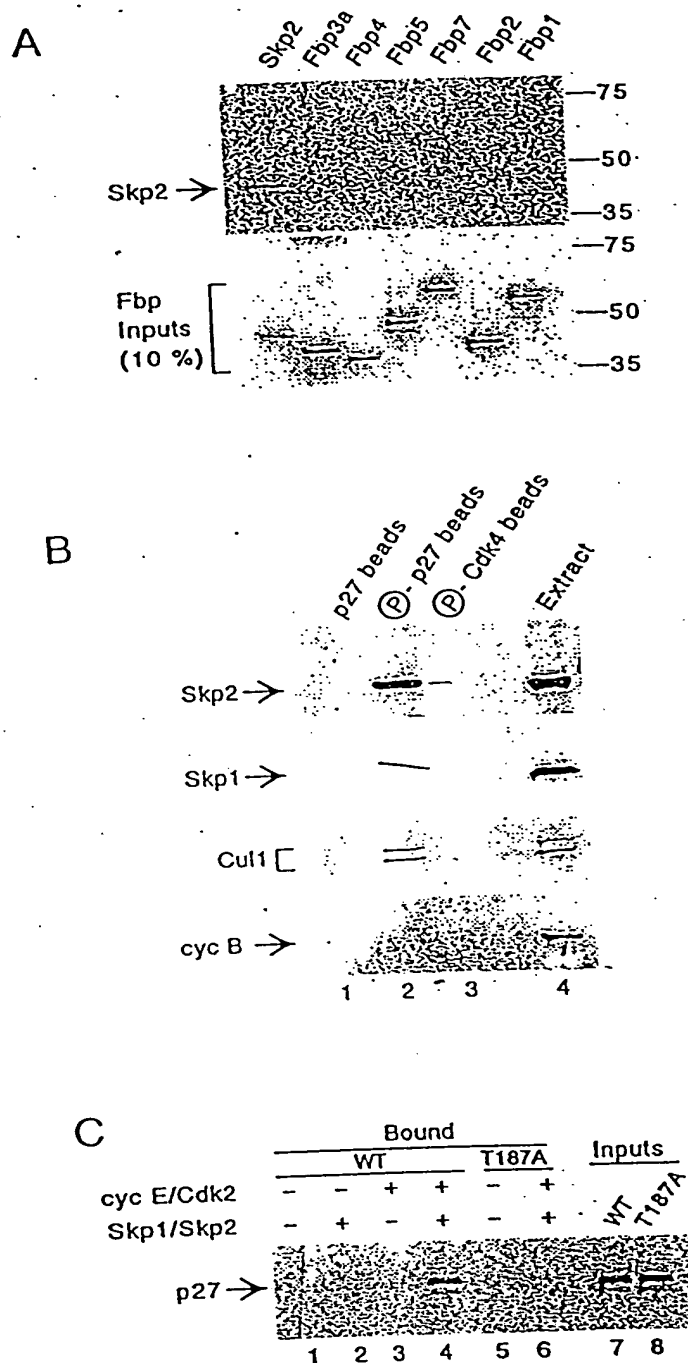


FIG. 37 A-C

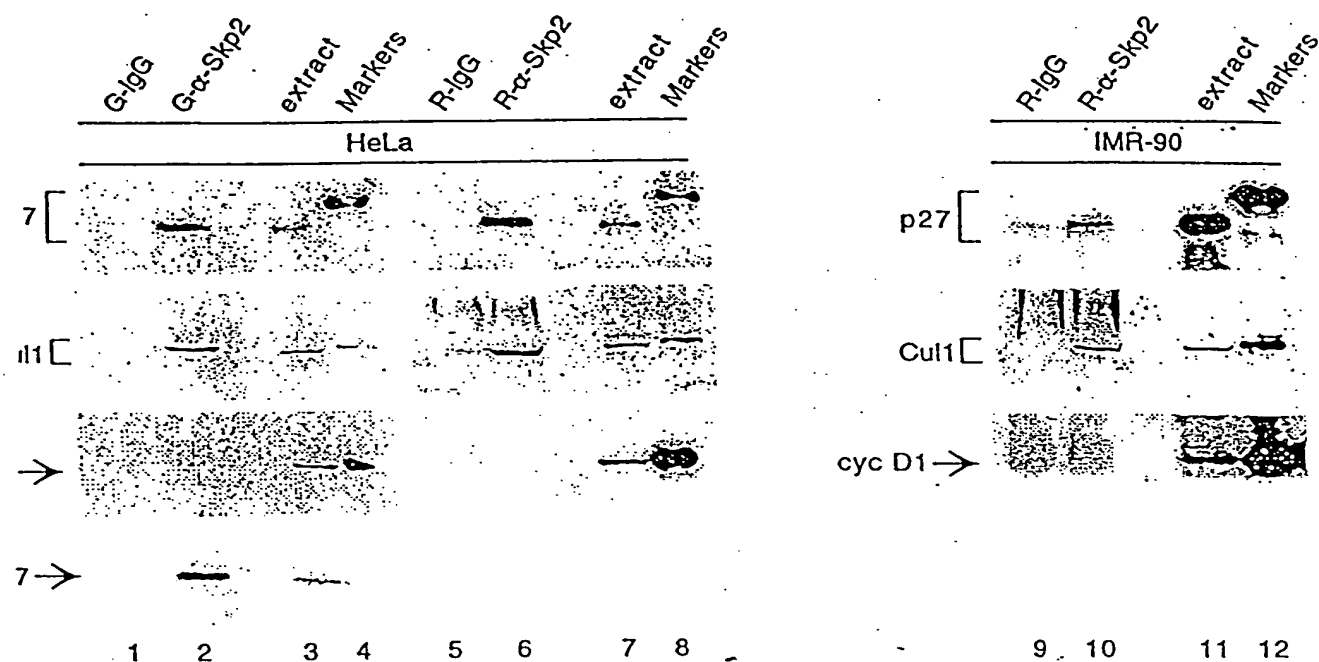


FIG. 38

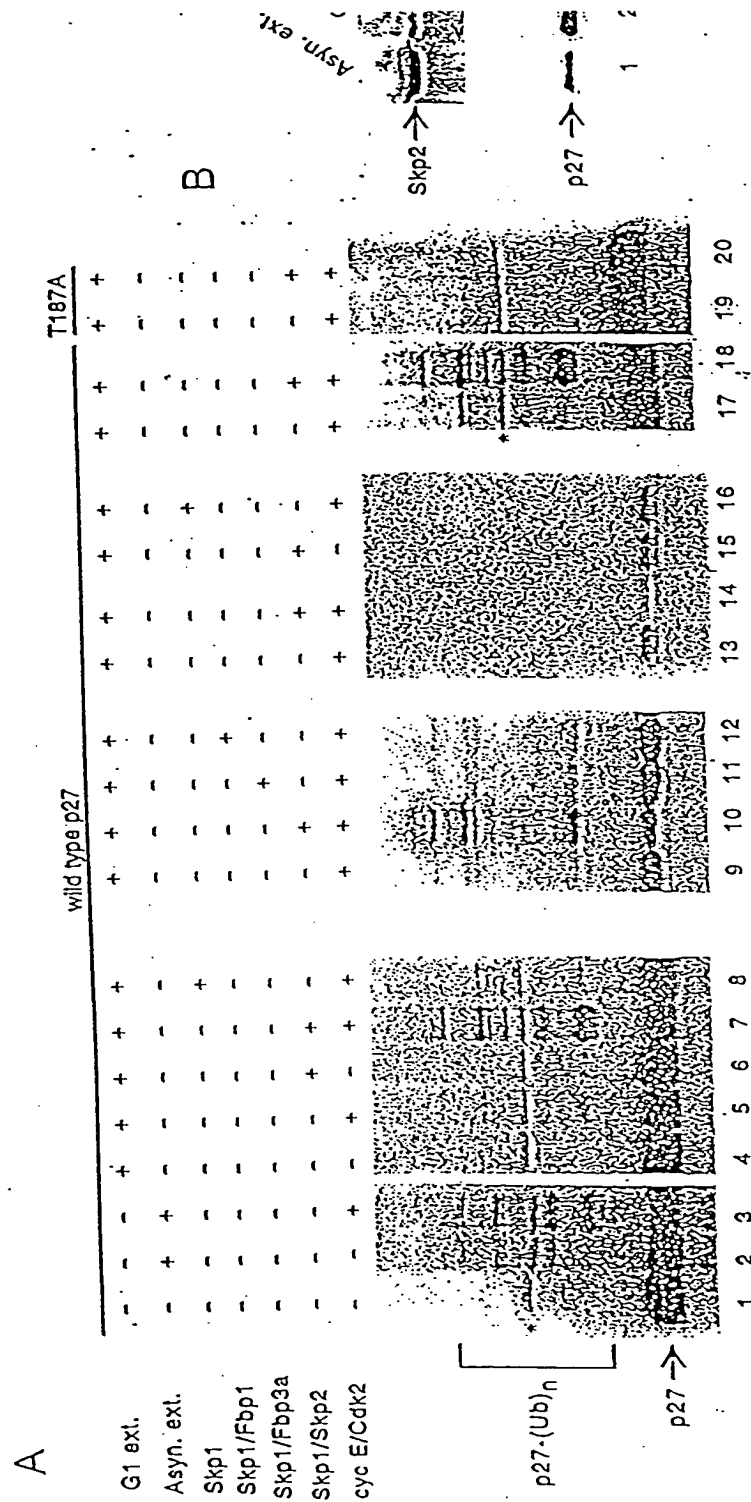


FIG. 39 A-B

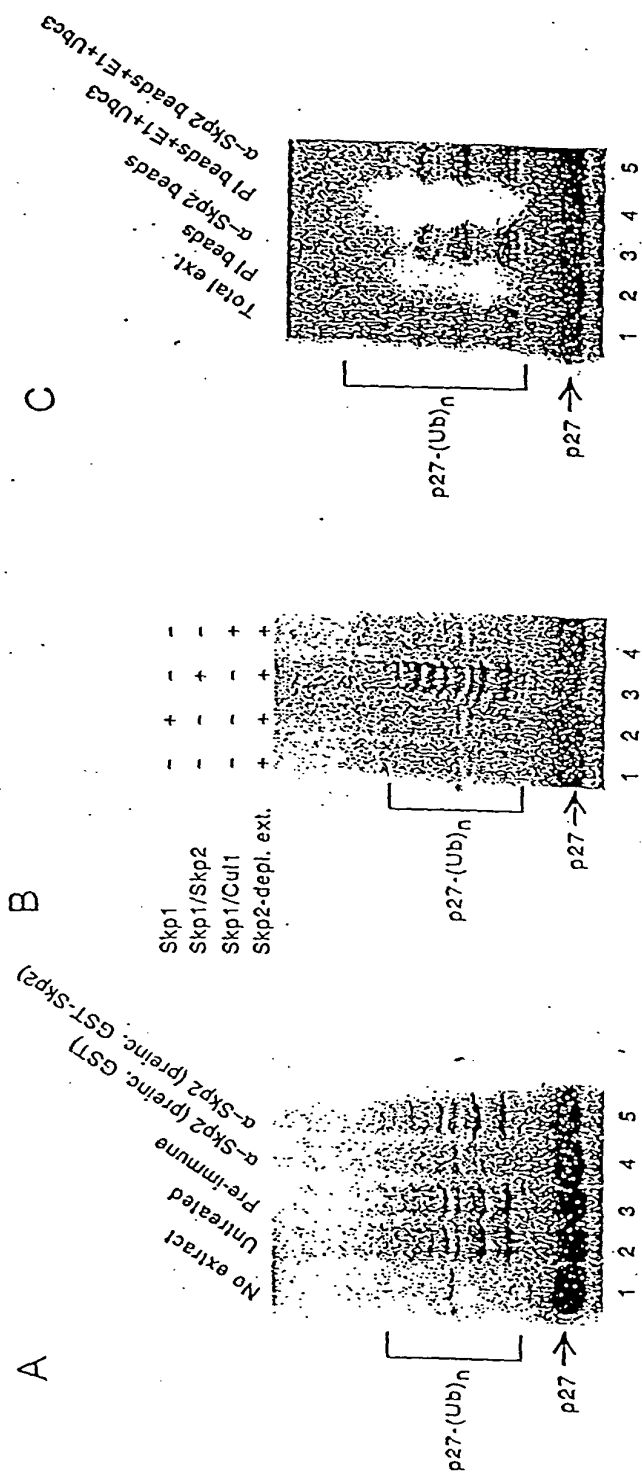
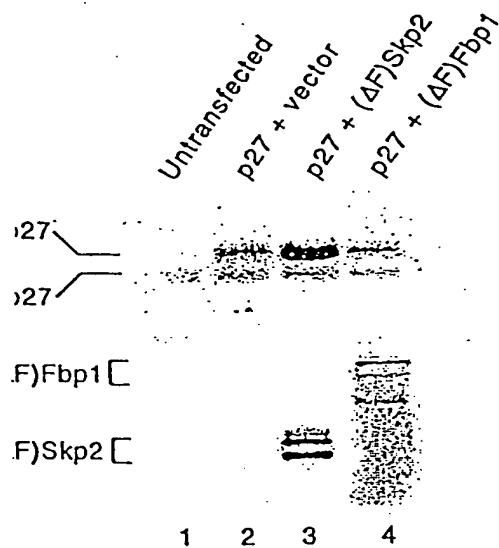


FIG. 40 A-C



B

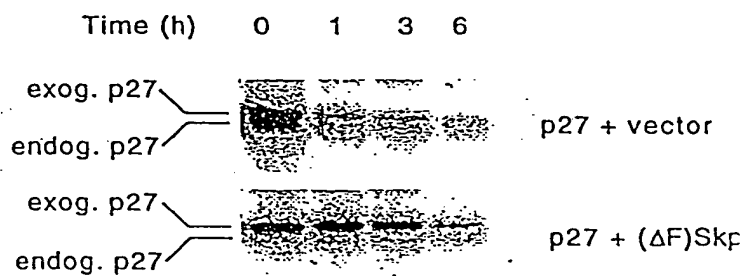


FIG. 41 A-B

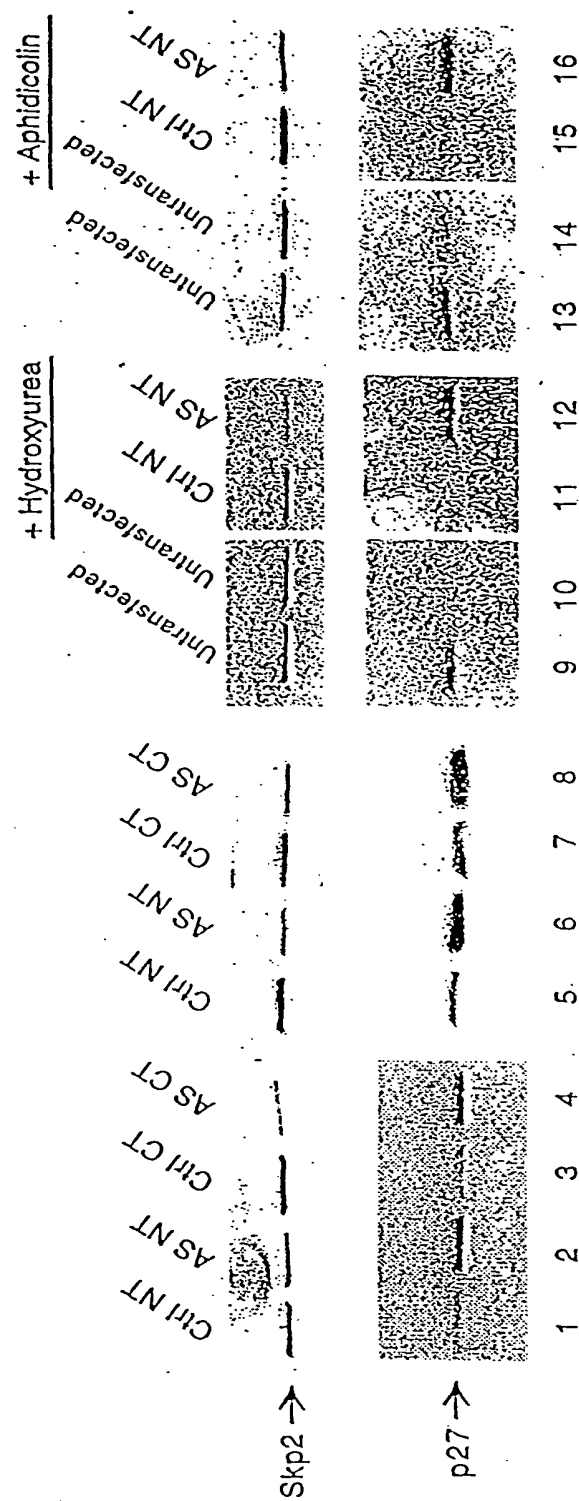


FIG. 42

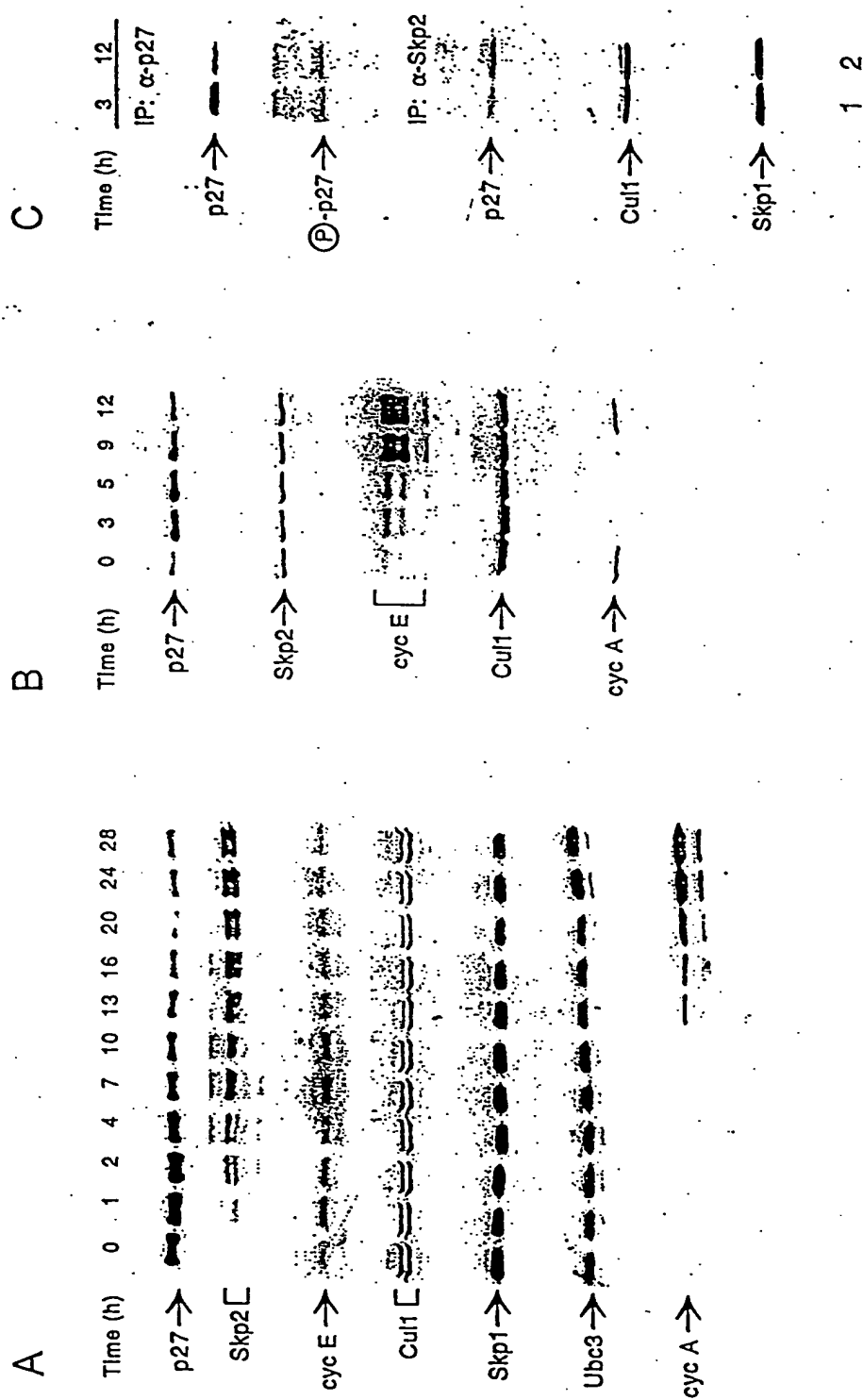
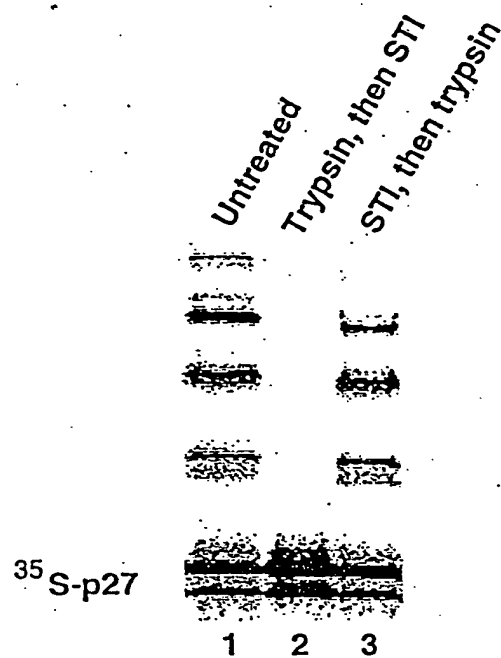
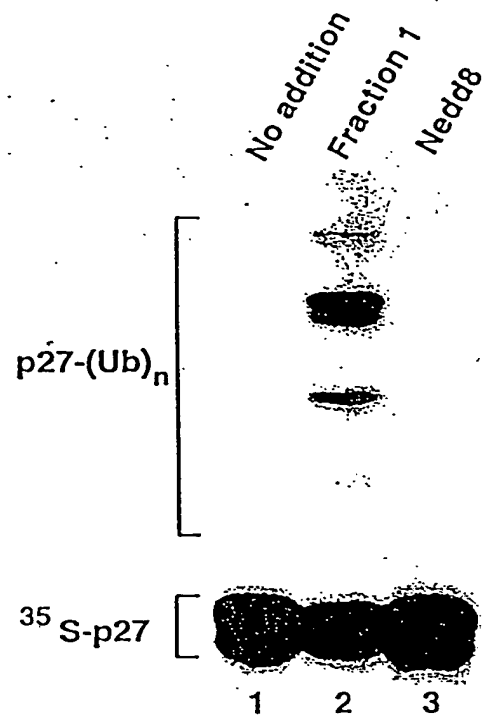
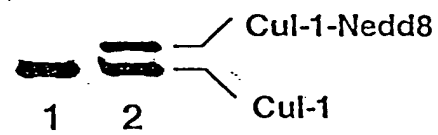
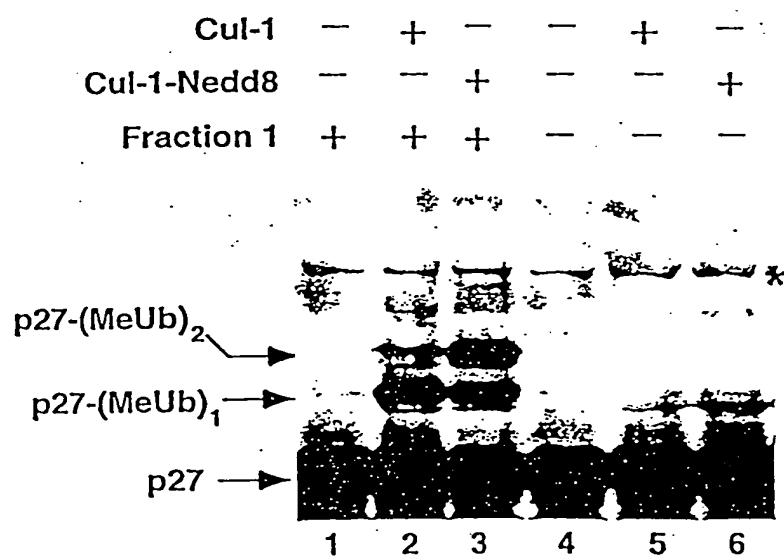
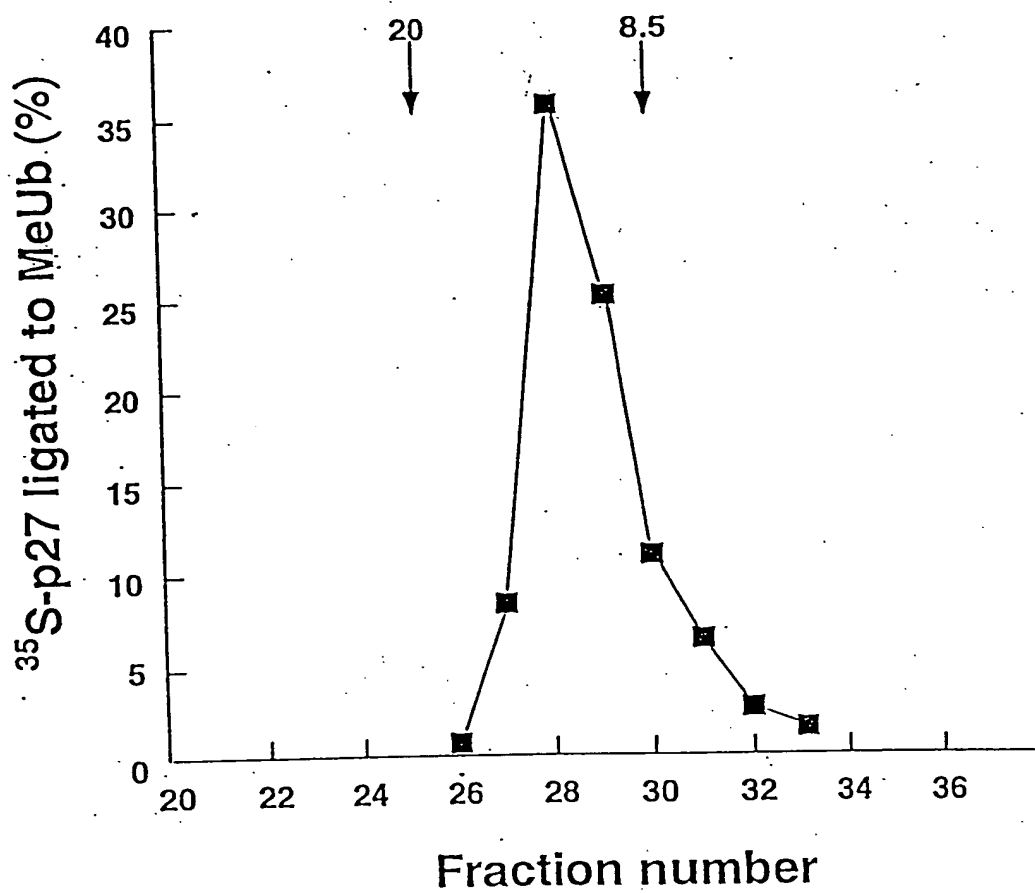


FIG. 43 A-C

**FIG. 44**

A**B****C****FIG. 45**

A.



B.

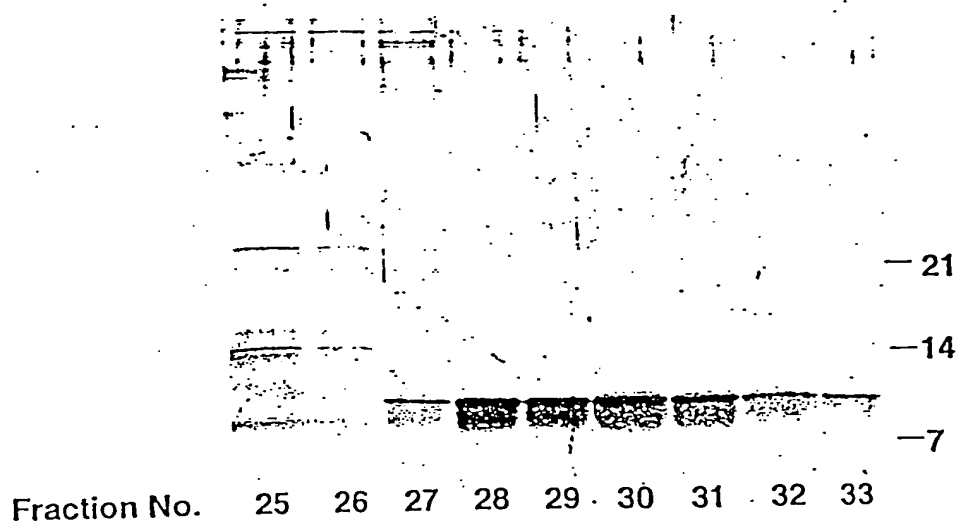


FIG. 46

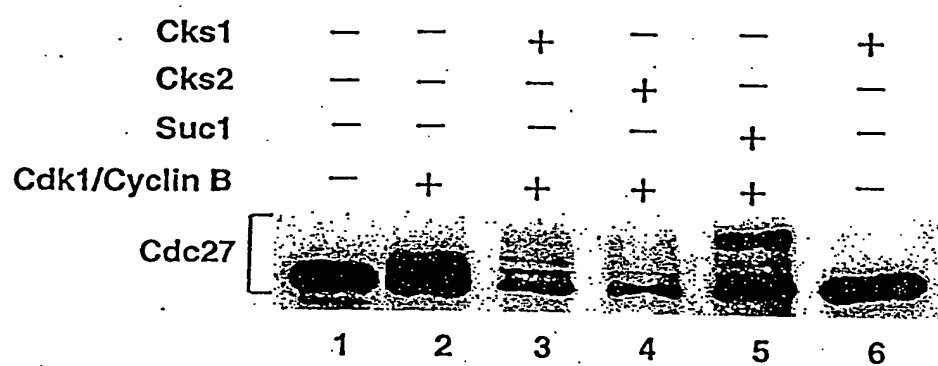


FIG. 47

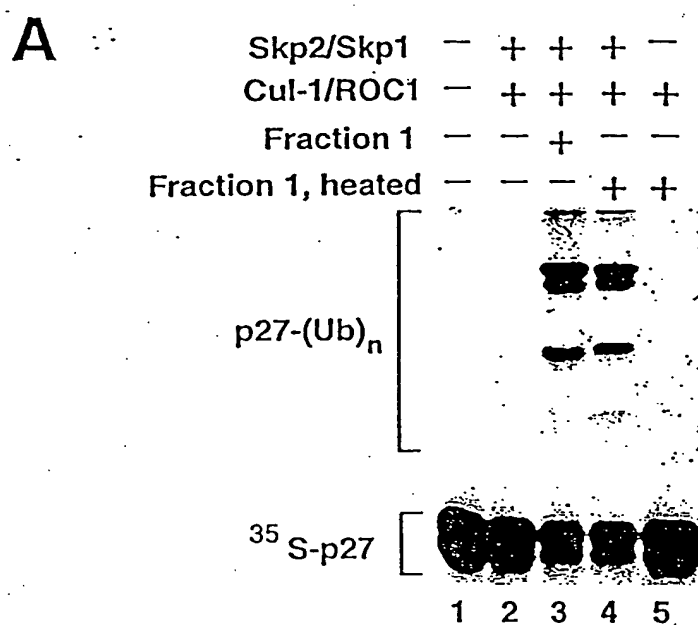
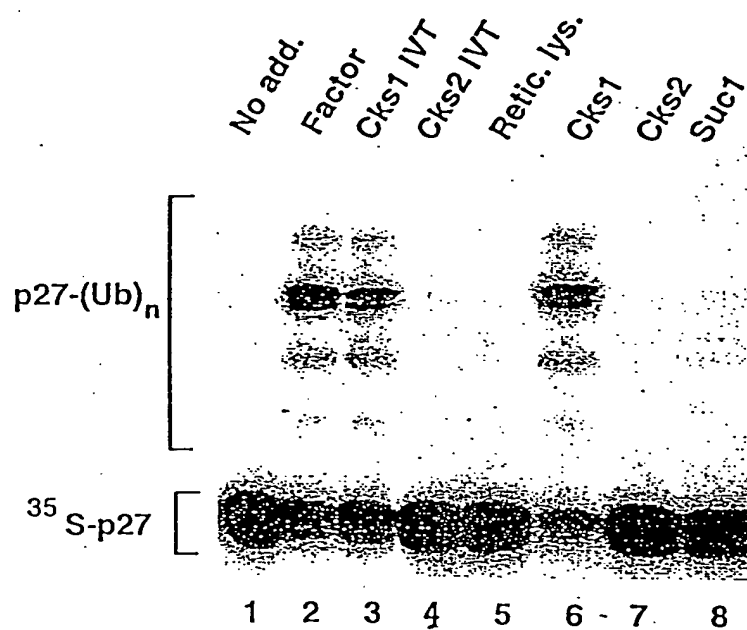
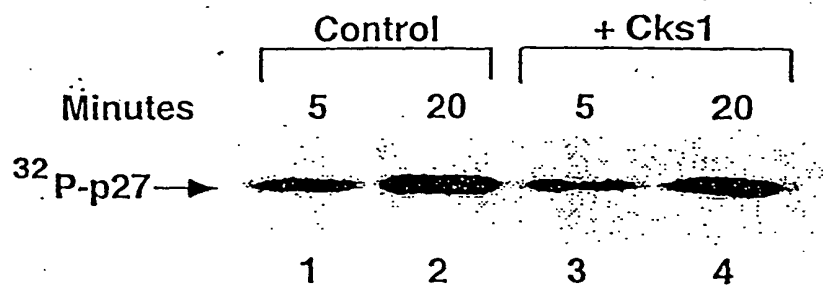
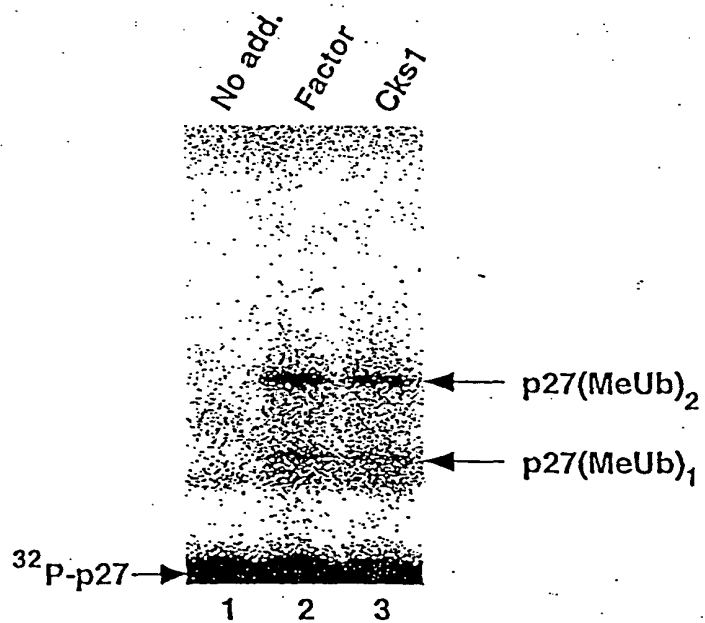
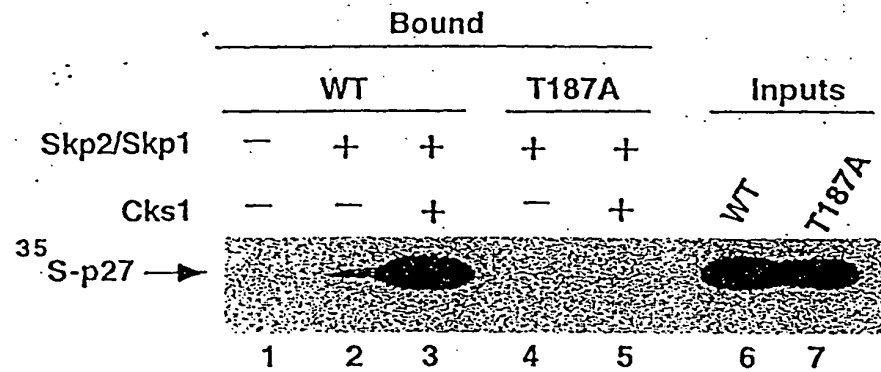
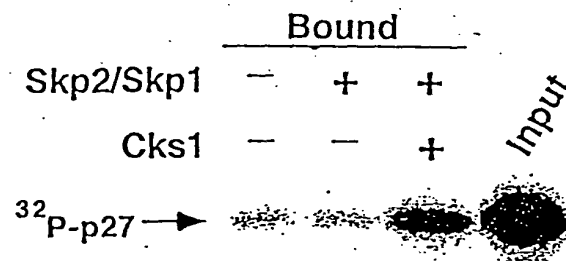
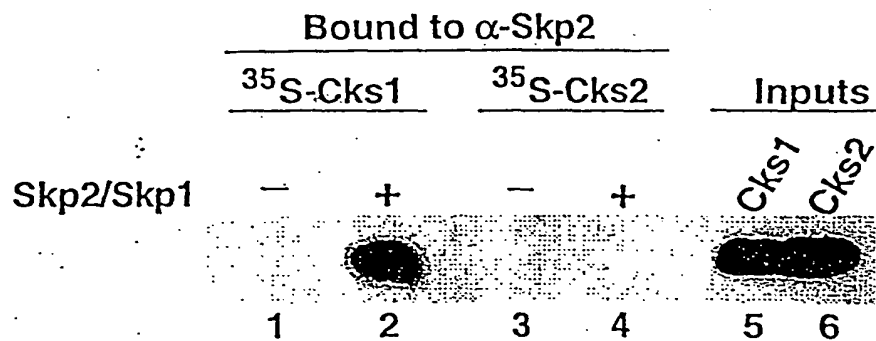
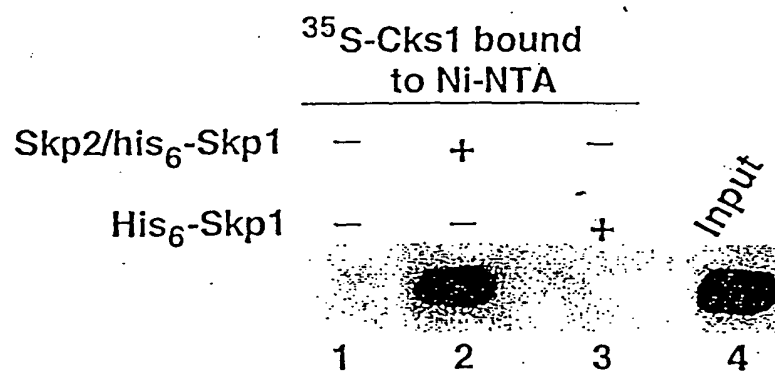


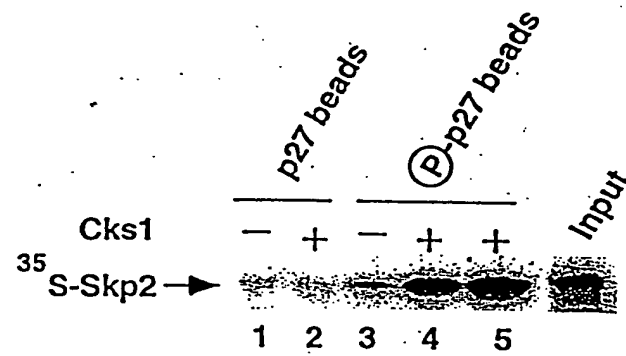
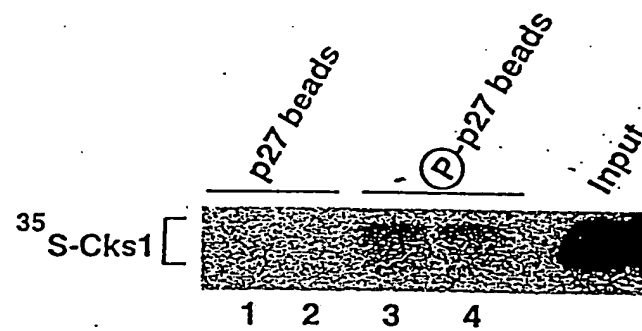
FIG. 48

B**FIG. 48**

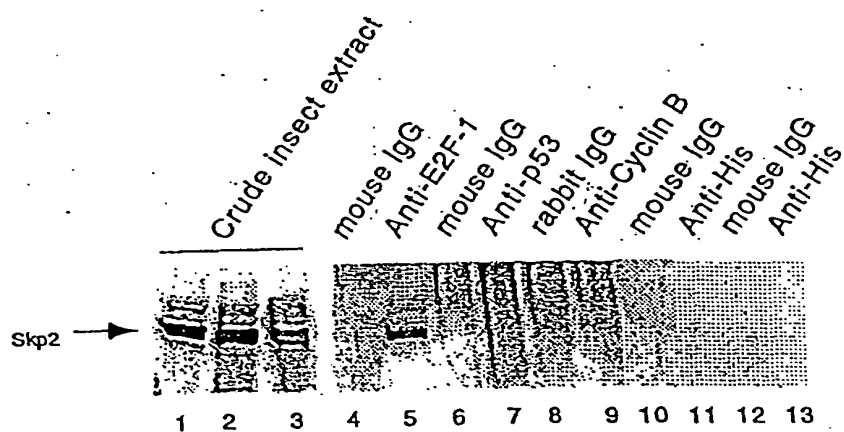
A**B****FIG. 49**

C**D****FIG. 49**

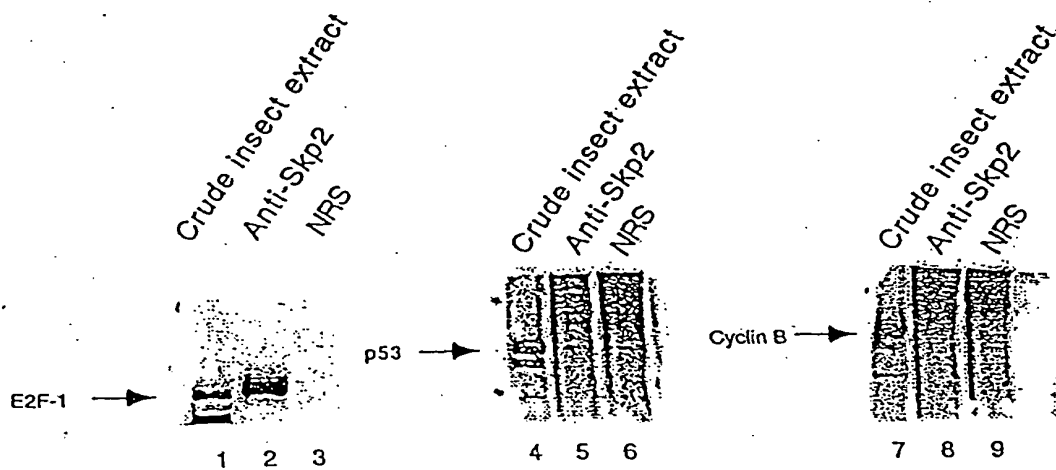
A**B****FIG. 50**

C**D****FIG. 50**

A



B



C

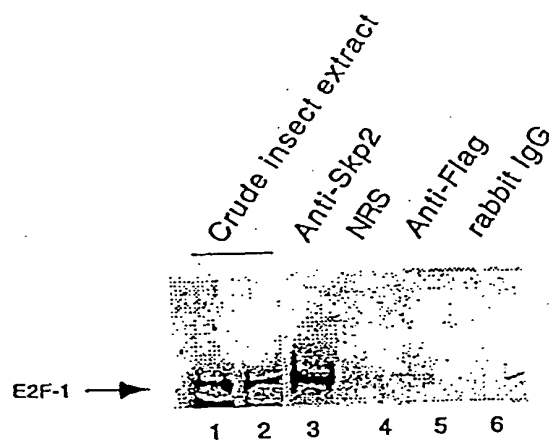


FIG. 51 A-C

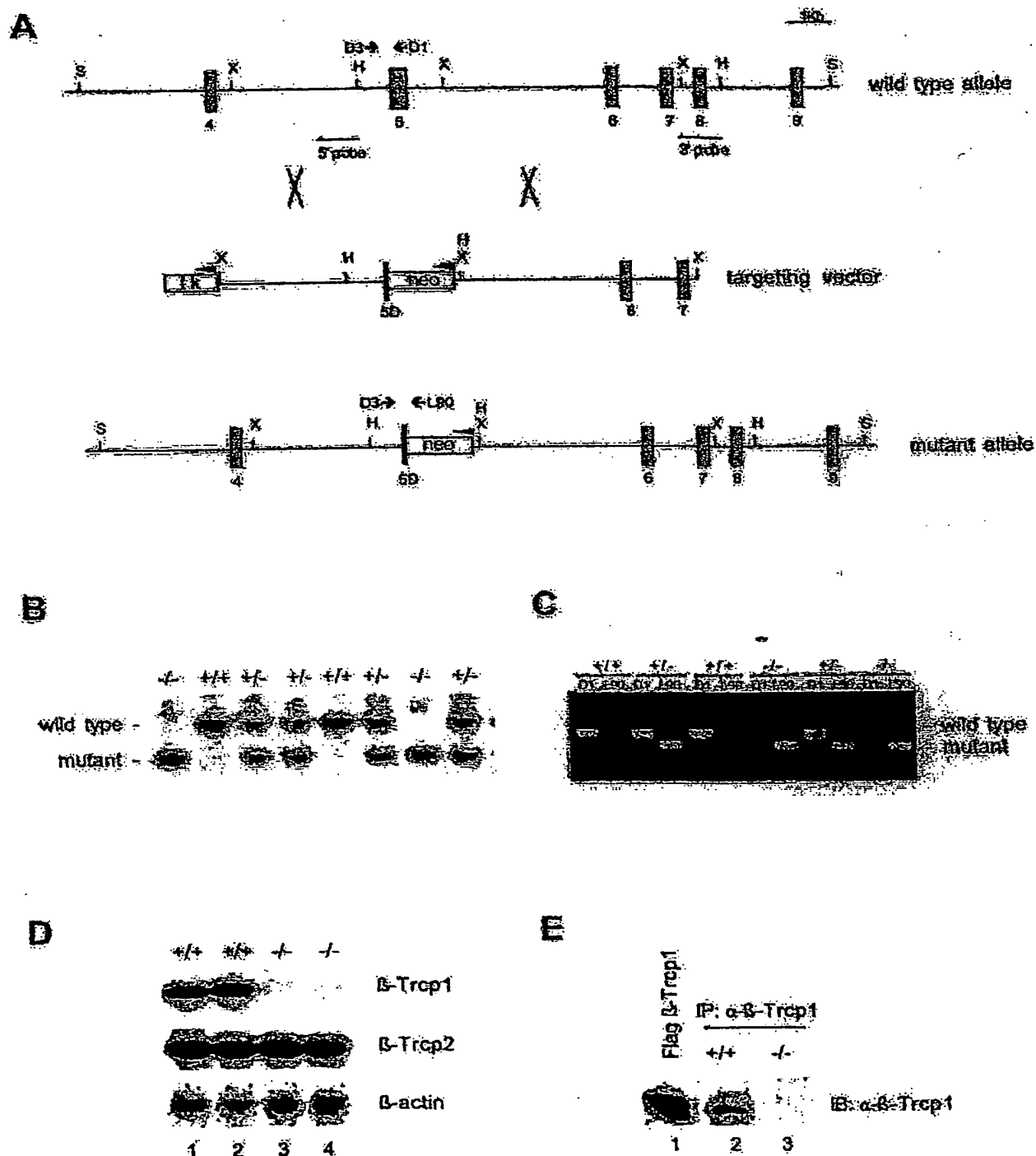


FIG. 52

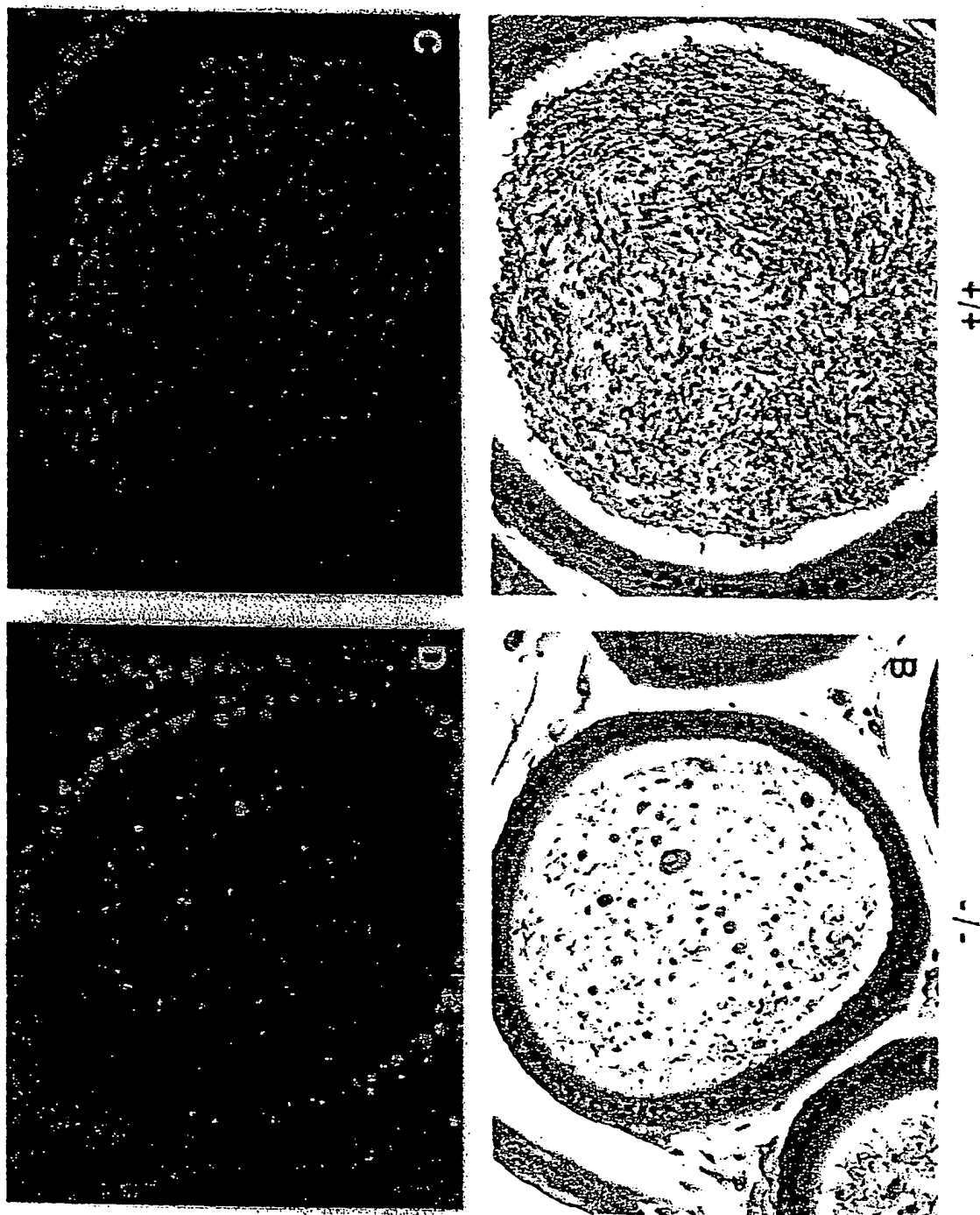


FIG. 53

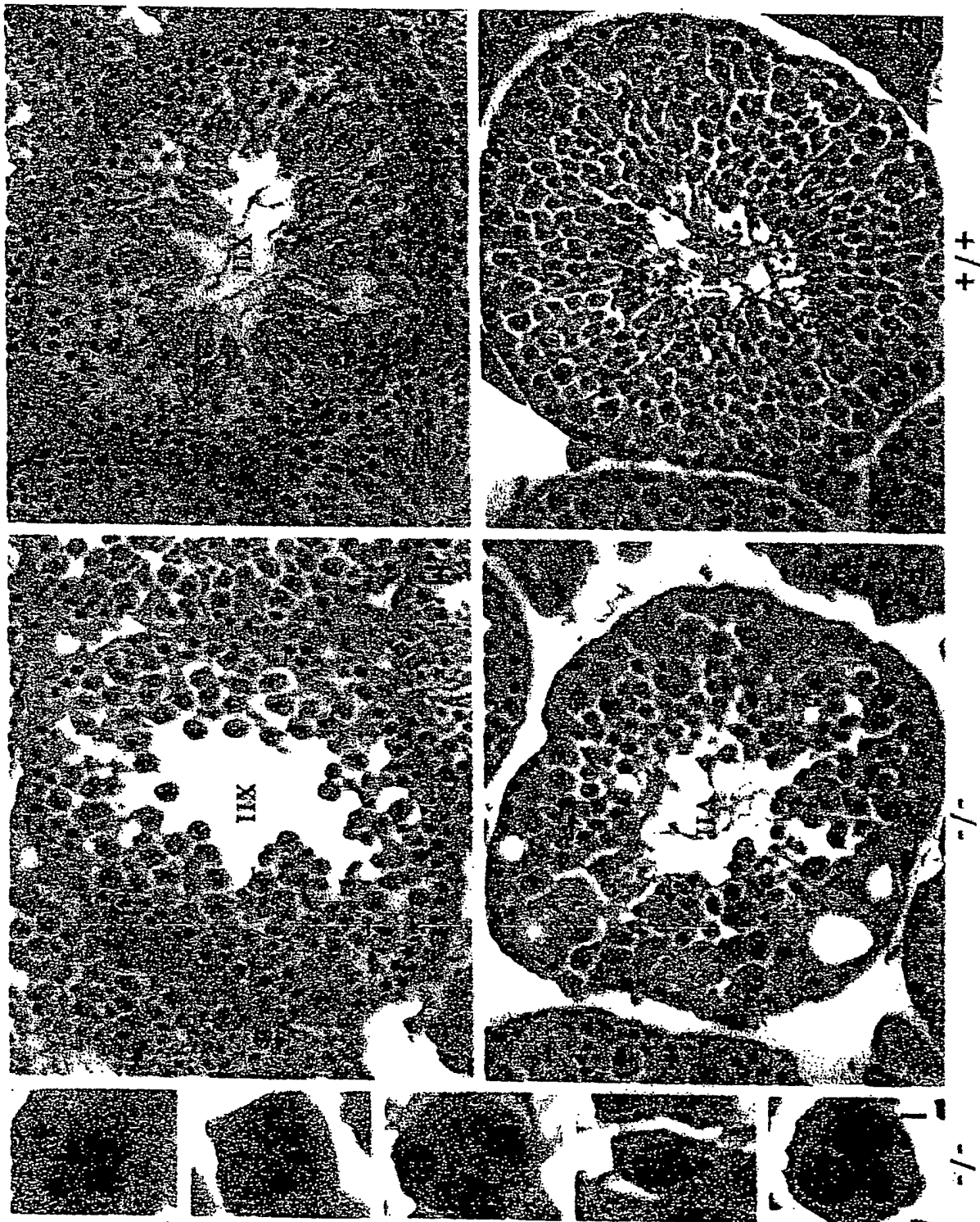
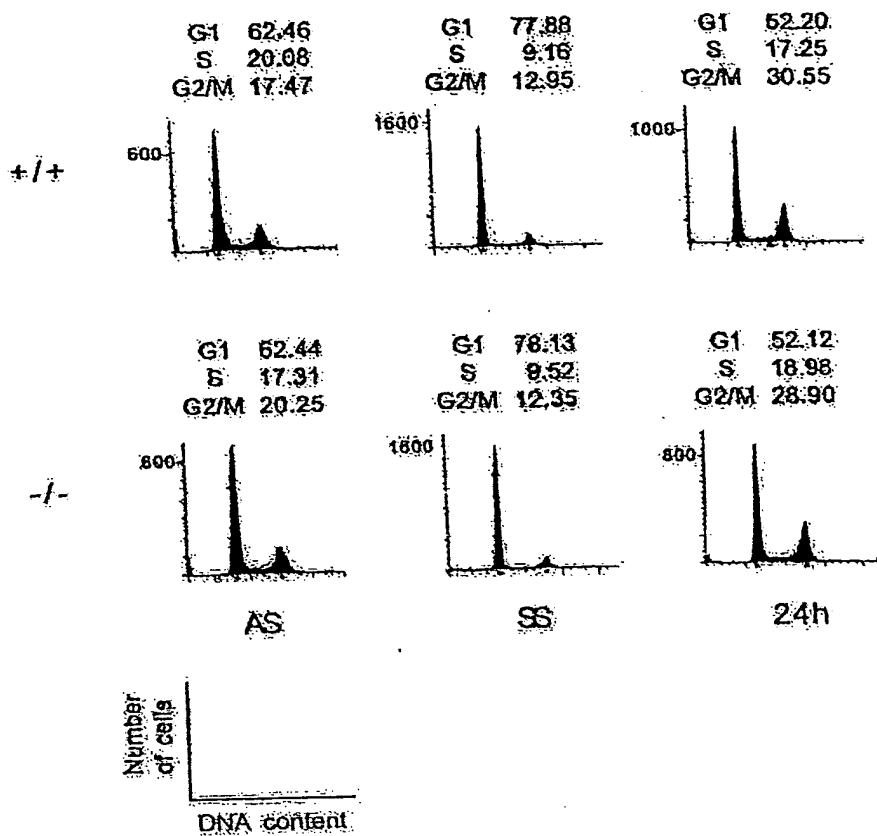
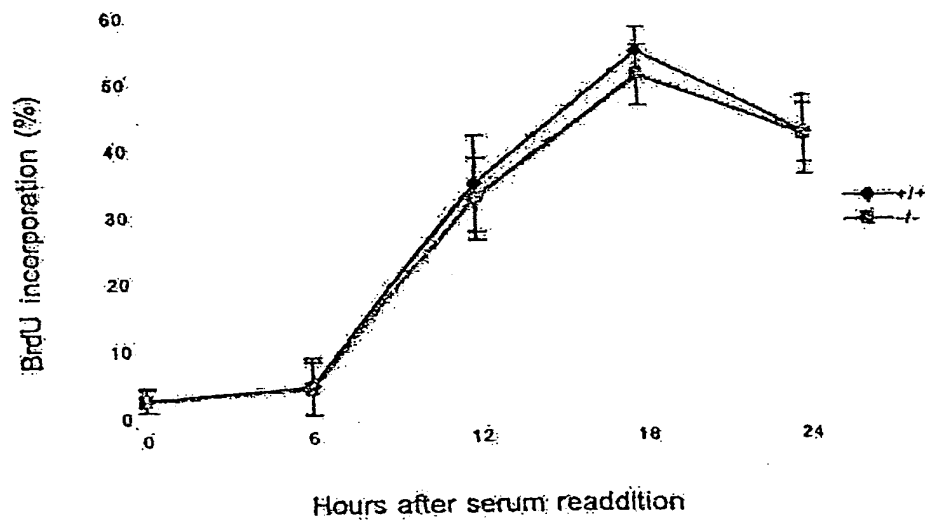
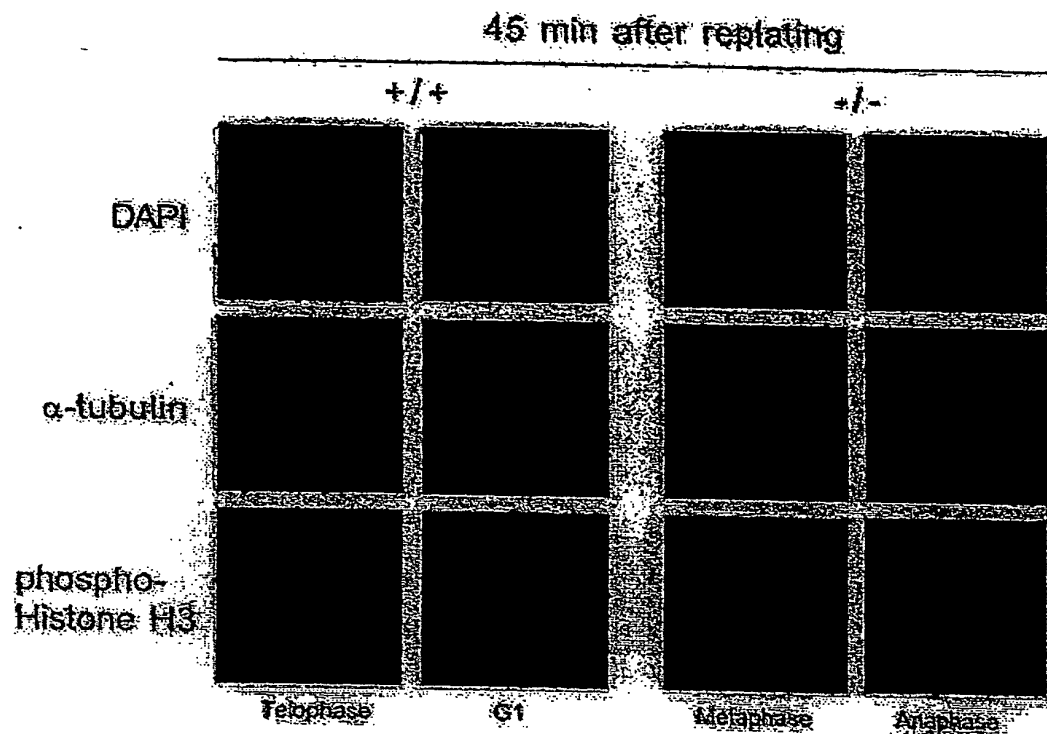
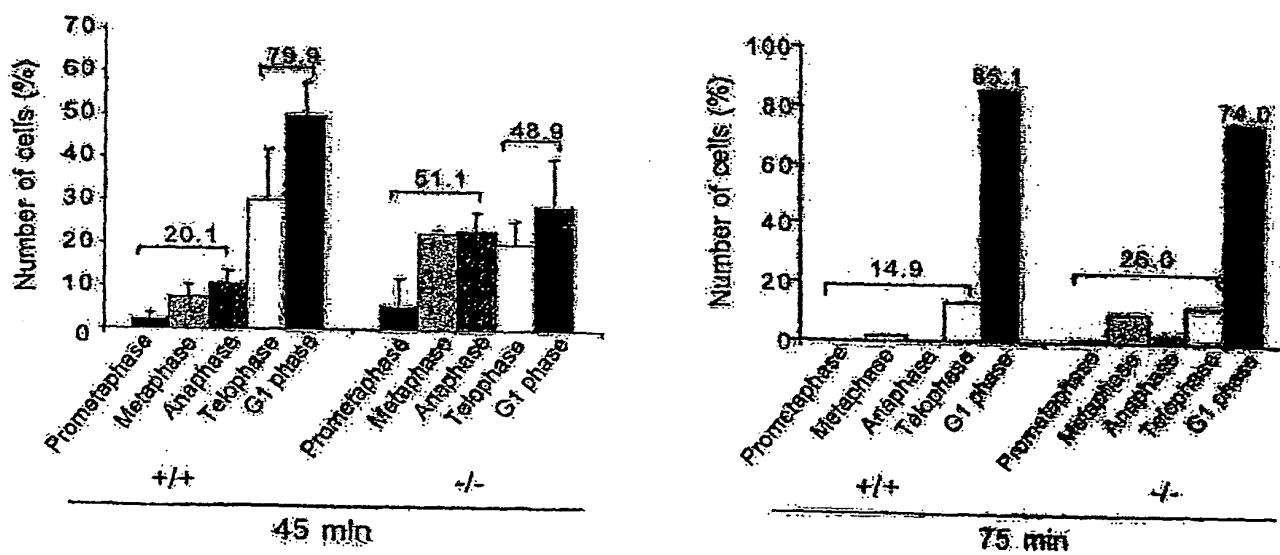


FIG. 53

A**B****FIG. 54**

C**D****FIG. 54**

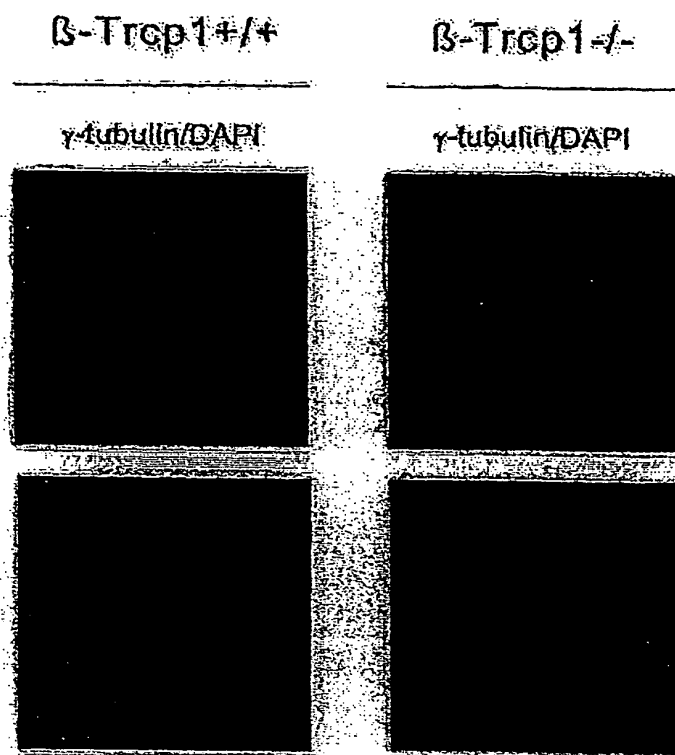
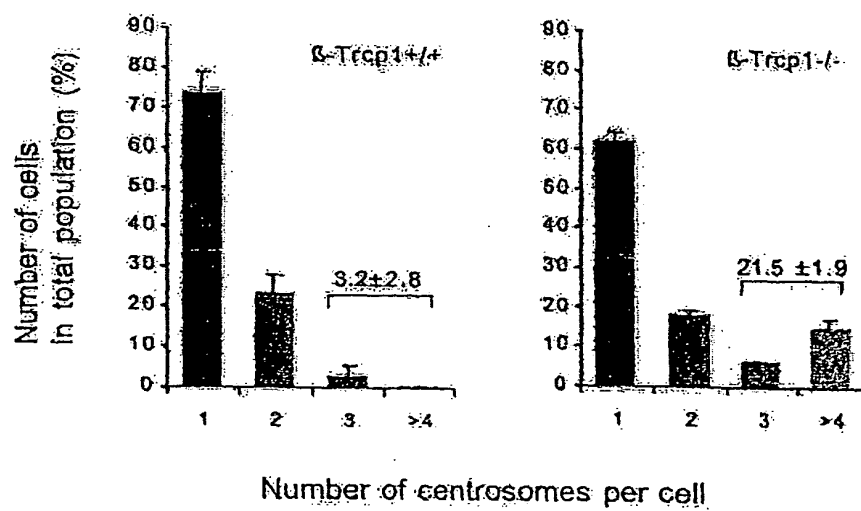
E**F**

FIG. 54

G

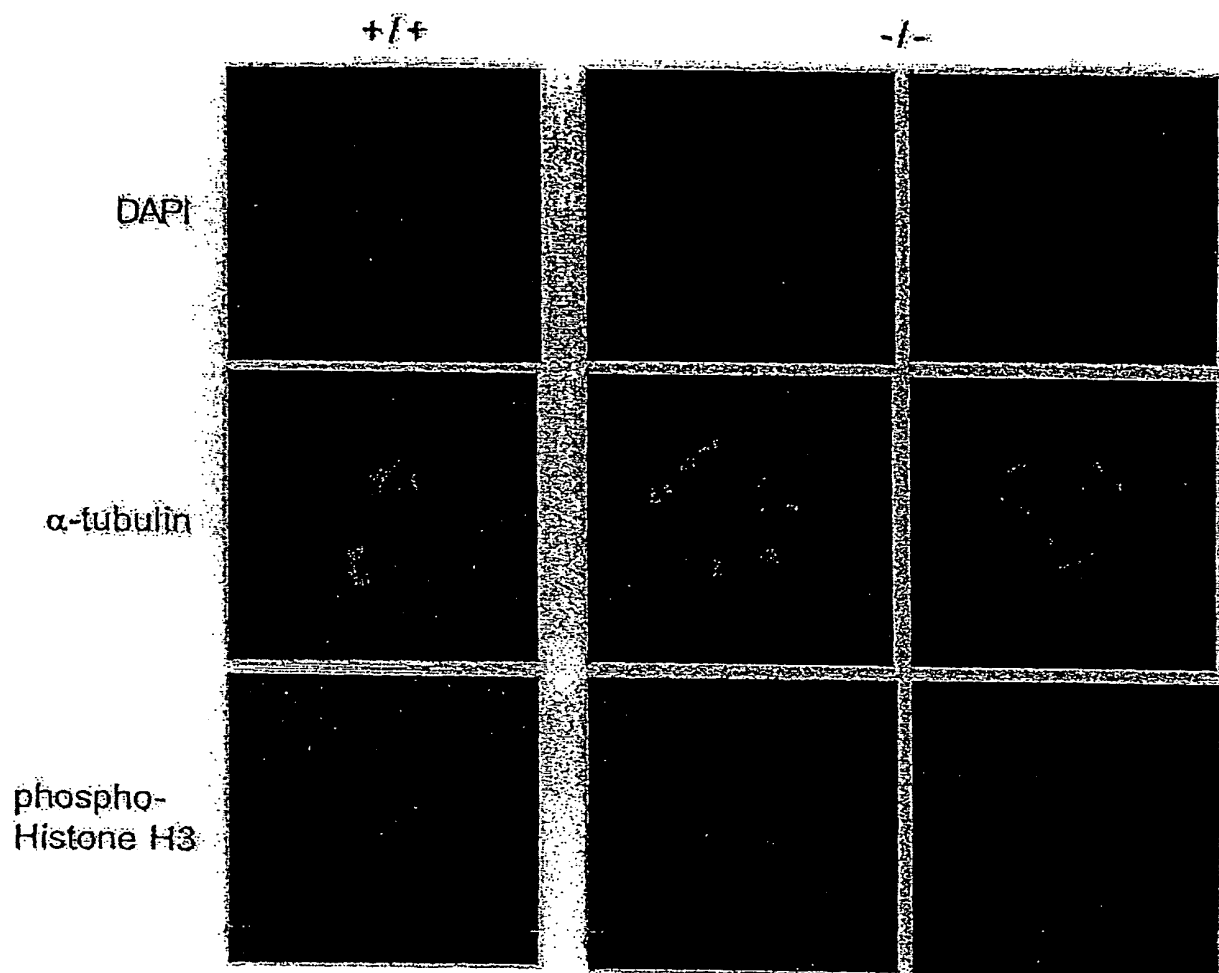


FIG. 54

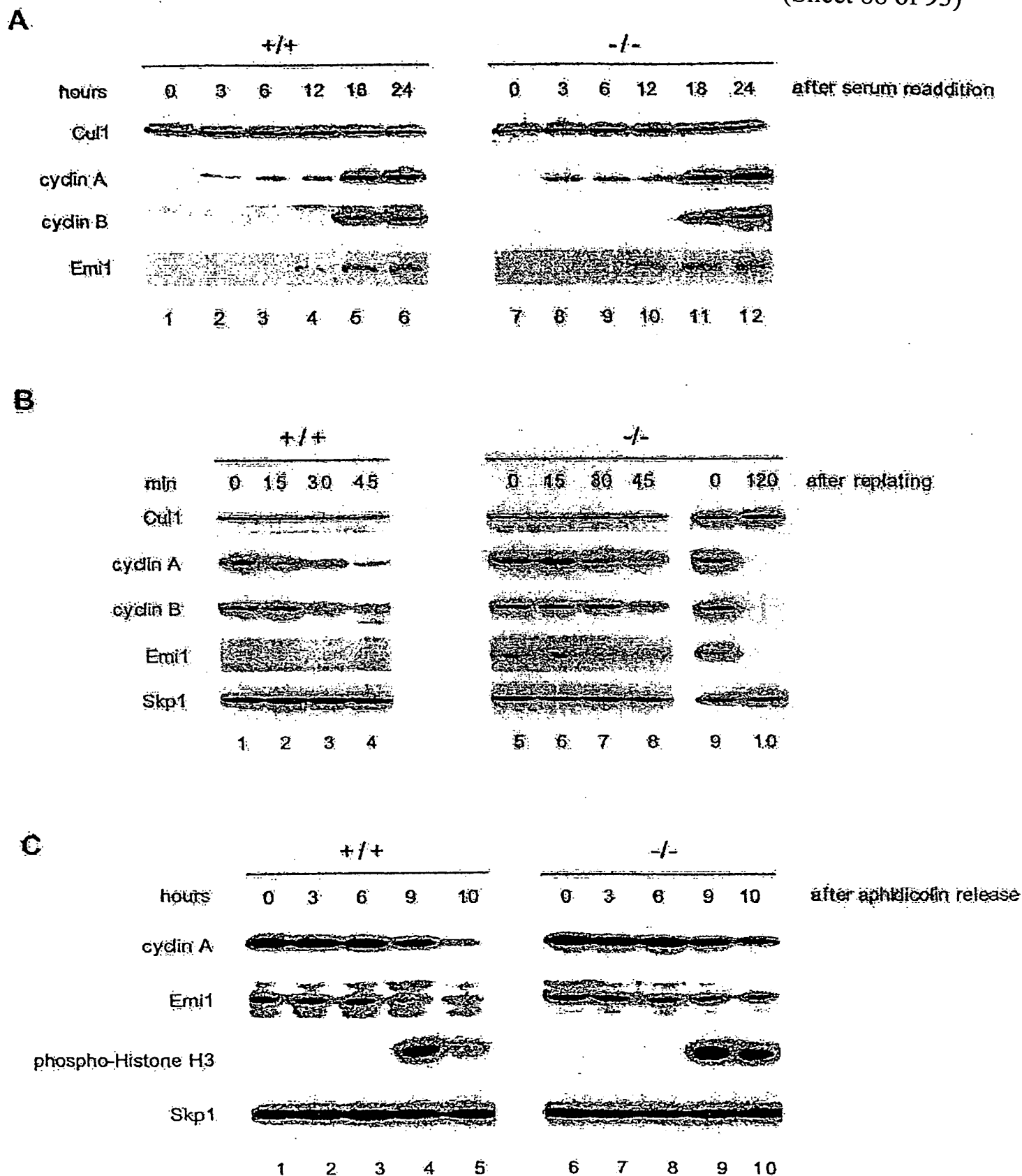


FIG. 55

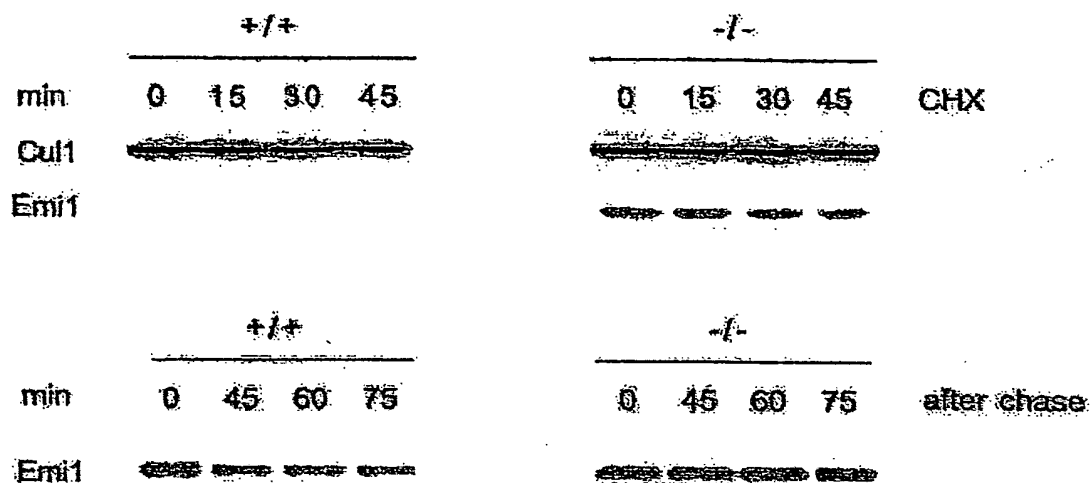
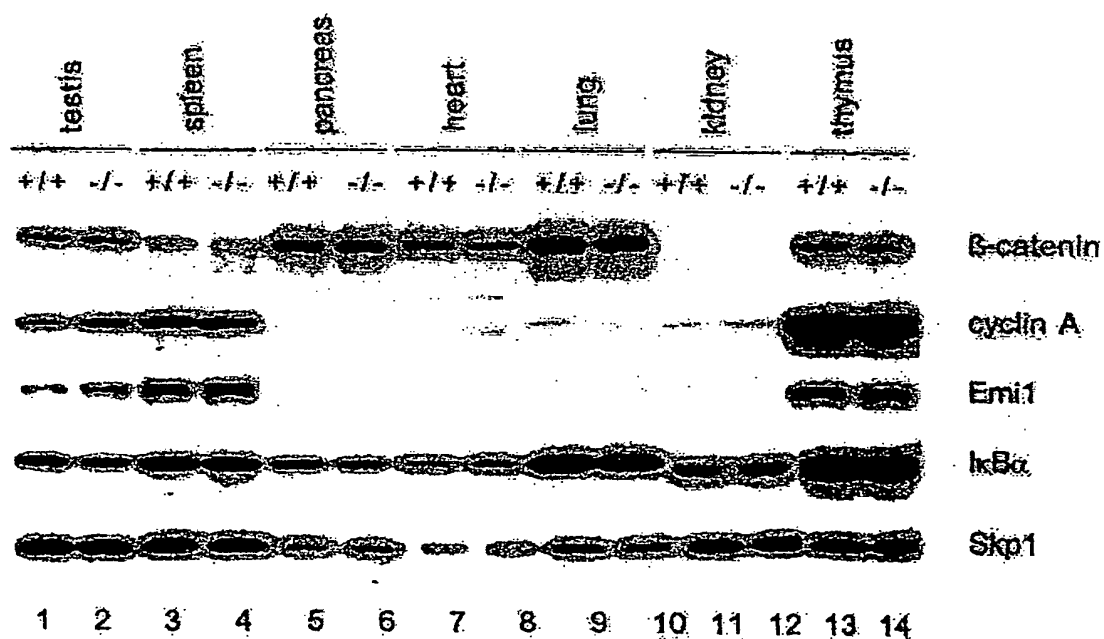
B**C**

FIG. 55

A

I κ B α (Hs)	28	D	R	H	D	S	G	L	D	S	S	M	K	D	39
β -catenin (Hs)	29	S	Y	L	D	S	G	L	I	H	S	M	A	T	40
Emi1 (Hs)	141	L	Y	E	D	S	G	L	Y	S	S	F	S	L	152
Emi1 (Mm)	62	L	Y	E	D	S	G	L	Y	S	S	F	T	Q	93
Emi1 (Xl)	91	A	L	Q	D	S	G	L	Y	S	S	L	Q	N	102
Emi1 (Dm)	249	S	L	M	D	S	G	L	N	S	S	I	H	L	260

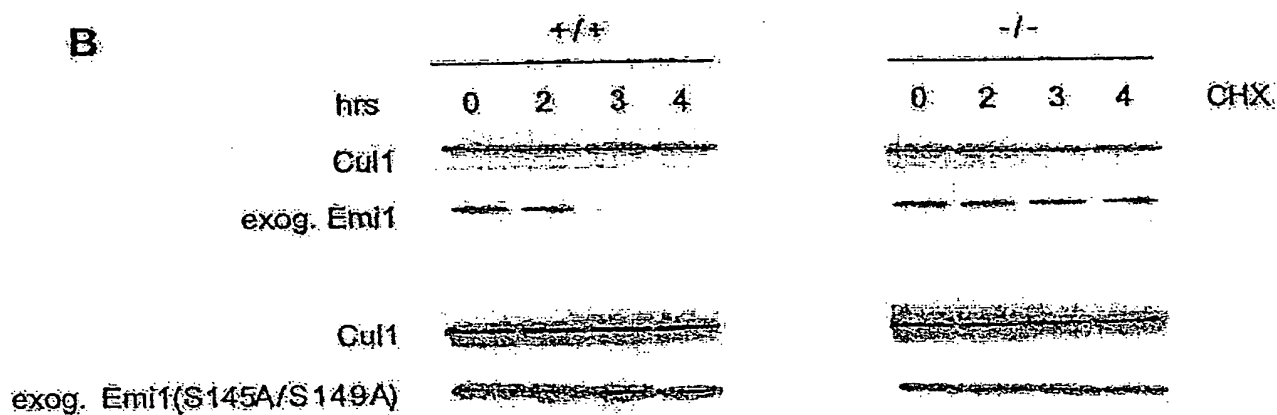
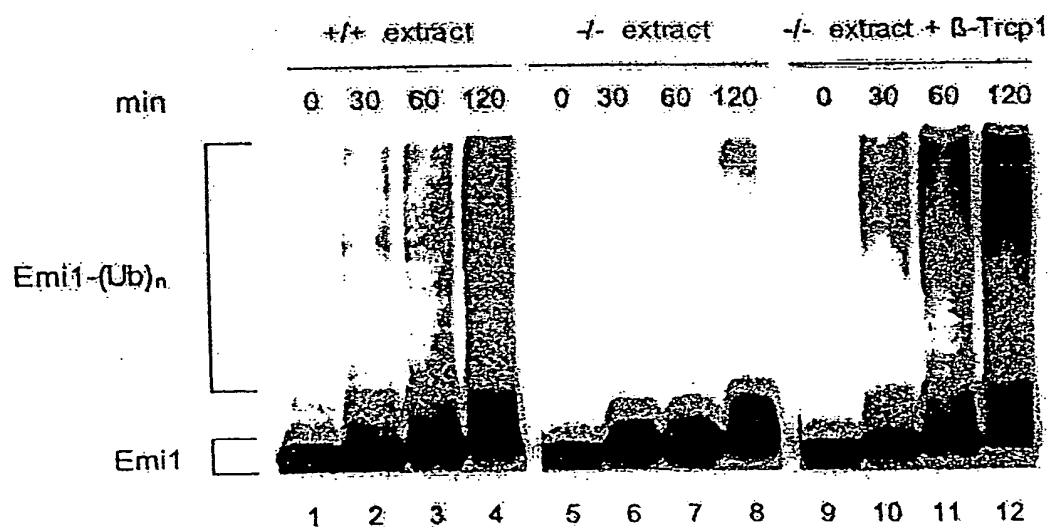
B**C**

FIG. 56

D

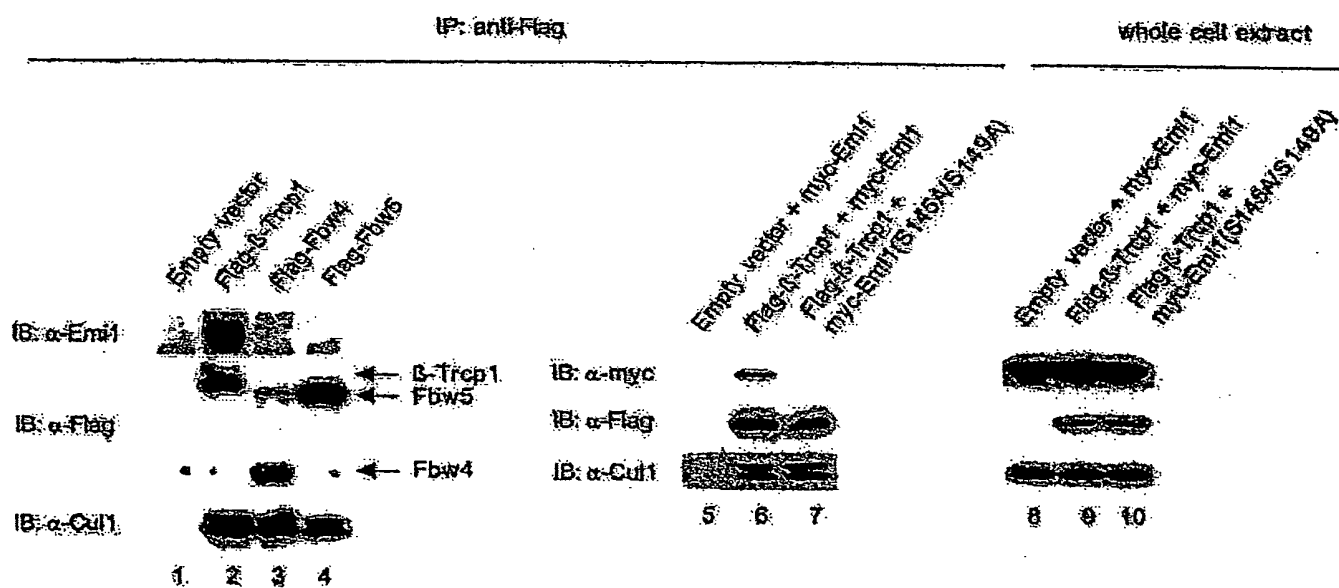


FIG. 56

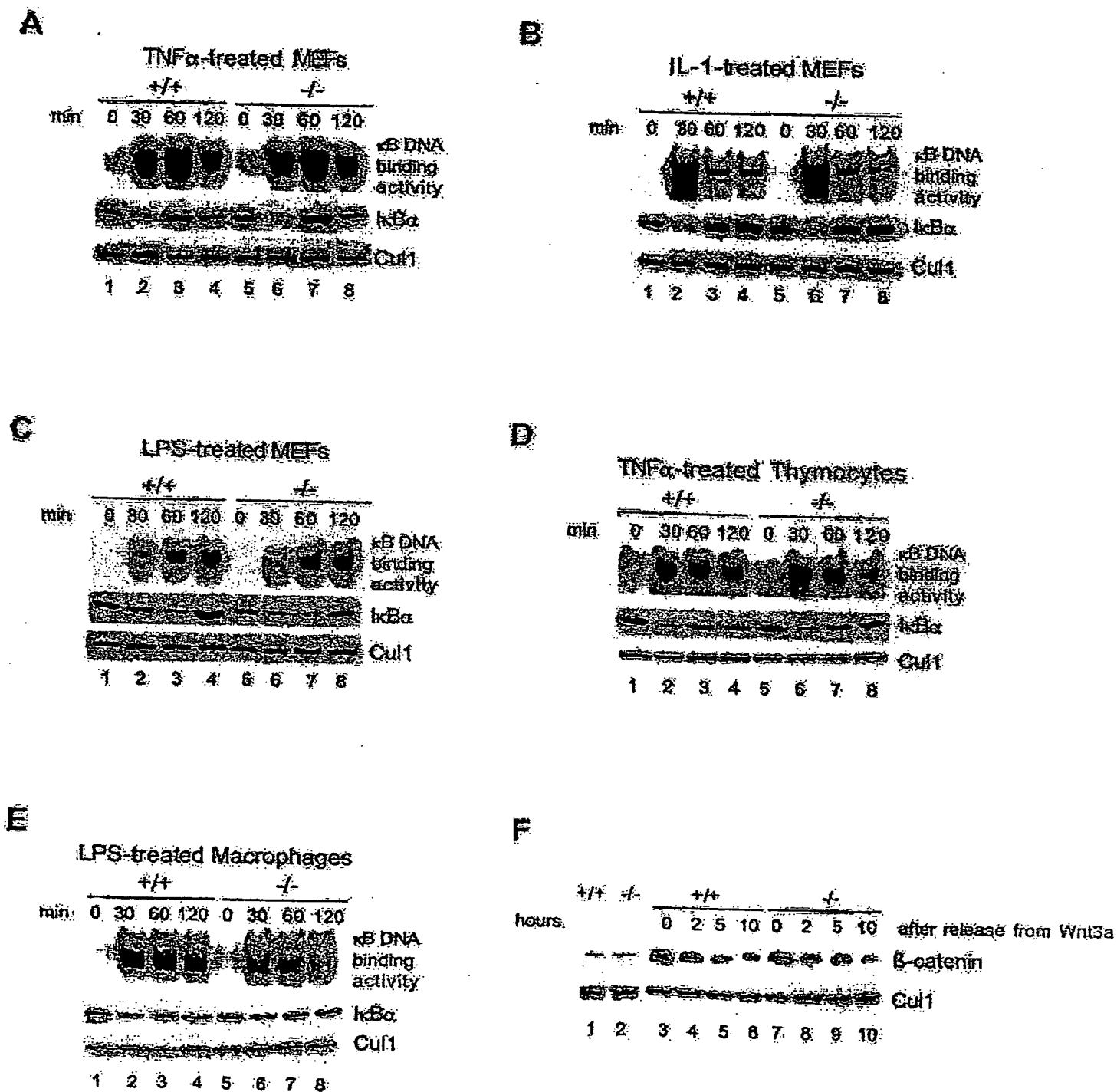


FIG. 57

